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THE
LECTURES
DELIVERED BEFORE THE
AMERICAN INSTITUTE OF INSTRUCTION,
AT HARTFORD, CONN., AUGUST 20, 1862,
INCLUDING
THE JOURNAL OF PROCEEDINGS,
AND
A LIST OF THE OFFICERS.

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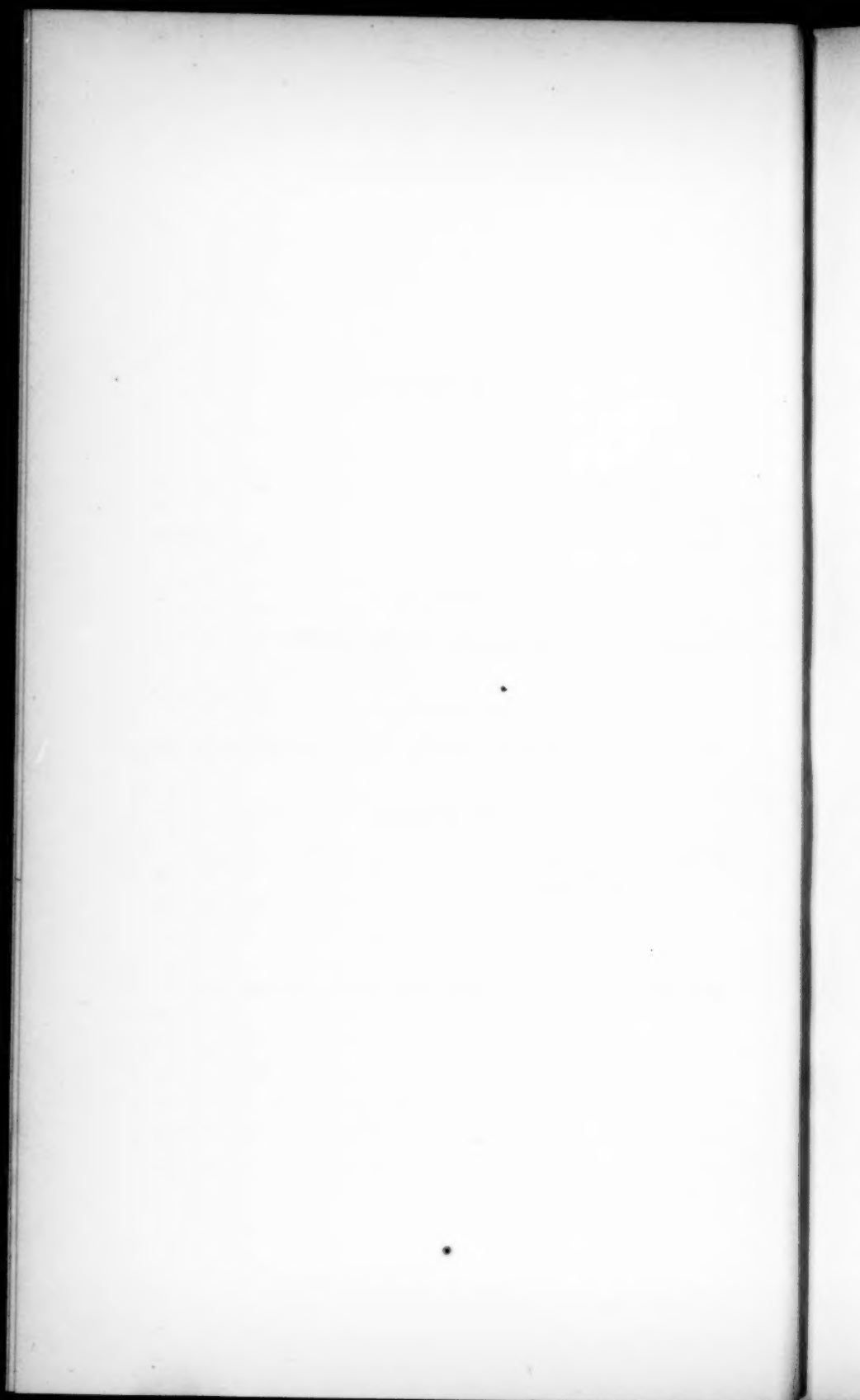
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AMERICAN INSTITUTE OF INSTRUCTION.

THIRTY-THIRD ANNUAL MEETING.

JOURNAL OF PROCEEDINGS.

HARTFORD, CONN., *August 20, 1862.*

THE Thirty-third Annual Meeting of the American Institute of Instruction commenced its Sessions at Hartford, Conn., in the State House, Wednesday, August 20, 1862, at half-past two o'clock in the afternoon.

There was a large attendance of the prominent teachers and friends of education from the North and East.

The meeting was called to order by the President, A. P. Stone, Esq., of Plymouth, Mass.

Joel Hawes, D. D., of Hartford, offered the opening prayer.

Rev. Mr. Washburn, of Hartford, on behalf of the School Committee and City, welcomed the Institute to Hartford, in the following words: —

MR. CHAIRMAN, AND LADIES AND GENTLEMEN OF THE INSTITUTE:

I am very glad to be able to-day, on behalf of the School Committee, to welcome you to this city. I am very sorry however, sir, that your visit should have taken place at such a time as this, when the excitement of other matters will oblige many, who would otherwise be interested in these services, to be absent.

However, I assure you, sir, that I am very happy to welcome you here, and to see that even in such war-times as these, when the sound of the drum and fife can be heard above the voices of the speakers in this hall, that we still have some hours of leisure to attend to the arts of peace.

In such times as these, no one seems to think anything about the school-book, but it is only war news which is on every tongue. It seems but right that our thoughts should refer back to the cause of this outrageous rebellion, now the very life of the nation is at stake.

The reason why we are now plunged in the horrors of civil war, is simply this: because there were men who, from the cause of selfish aggrandizement, would arm themselves and others against the best government the Almighty ever permitted a nation to enjoy.

We can only hope, that at your next meeting, every State will be represented

I am very glad that you should have chosen our city for your meeting, and I hope you will enjoy your stay here; and you may be assured that everything that can be done to render it agreeable we will gladly do; and everything we have we will gladly throw open to you.

Again, sir, in behalf of the School Committee, I tender to you a most cordial welcome to the city of Hartford.

Hon. D. N. Camp, Superintendent of Public Instruction of Connecticut, was introduced, and in a few words introduced his Excellency Governor Buckingham, of Connecticut, who was received with applause. He spoke as follows:—

MR. CHAIRMAN, LADIES AND GENTLEMEN:

When I came in here and took my seat, I did not expect to address the teachers. I must say, however, that I am very happy to obtain a short rest from the almost exclusively military occupations in which I have been engaged,

and welcome you to the State of Connecticut, and to Hartford its capital ; and I assure you that the cause of education, for which you are laboring, has my most hearty sympathy ; it has among its votaries many of our greatest and best minds ; it is worthy of the attention of every liberal minded and educated man.

I am very glad to see you here ; and although we cannot boast of any museum or gallery of paintings, still you may be interested in looking at many of the curiosities and paintings which we have collected at the Historical Rooms, and at the Athenæum.

During your sojourn in our city everything will be done to make your stay pleasant and agreeable, and I do most cordially welcome you to the State of Connecticut, and to the city of Hartford its capital, to remain as long as it may seem pleasant to you.

The President replied as follows : —

MR. WASHBURN, AND YOUR EXCELLENCY THE GOVERNOR :

It gives me great pleasure, gentlemen, to return, in behalf of the members of the American Institute of Instruction, our grateful thanks for the cordial welcome you have extended to us in words so full of kindness and greeting. You are well aware, I have no doubt, gentlemen, of the character of our mission to your goodly city. The American Institute of Instruction is an educational association, which has been known to the American public for more than thirty years. Its object has been, and still is, to promote the interests of the teachers' professions, to elevate its standard, and to aid in the great work of the diffusion of learning among our whole people. We convene to-day to commence one of our annual sessions in your State and city. It is now holiday time to most persons of our call-

ing; the school, the college, and the study, are now closed, and teachers, professors, and educators of other name, have come together to participate in exercises which to-day we are to inaugurate. We come from the East and the West, and if the States of the Sunny South are not represented here to-day it is no fault of ours. We are glad to meet here in the city of Hartford, in this beautiful valley of the Connecticut River; a city well known to us for its various institutions, its manufactures, for its beautiful homes and delightful scenery. We are glad to meet in a State so long and honorably known for its interest in the cause of education, as the State of Connecticut; a State whose laborers in a good cause we are accustomed to meet in our sessions like these, and whose zeal and sympathy we always find so encouraging; a State whose history we learned in our schoolboy-days with so much delight, and have since cherished with so much pride; a State whose chapter in Geography we all remember was prefaced by the representation of a church and school-house, side by side, a farmer ploughing in the field, and the children playing on the school-house green; a State which has been the home of Roger Sherman, of Israel Putnam, of President Dwight, and General Lyon. We come among you at a time when the entire community is alive with the din of arms, when the drum-beat of the recruiting officer is heard on all sides; but we hope, gentlemen, that even amid such excitement, which engrosses the attention of the people, we may be able to spend a few days in mutual deliberation upon the more immediate duties of our calling as teachers and educators. It will be gratifying to us to be favored with the attendance of yourselves and your fellow-citizens at the sessions of our Institute, and to have you participate with us in our deliberations. Once more, I return our grateful acknowledgments for the welcome you have just extended us.

THE PRESIDENT'S ANNUAL ADDRESS.

MEMBERS OF THE INSTITUTE, FELLOW-TEACHERS, AND FRIENDS
OF EDUCATION :

I am happy to congratulate you, most cordially, upon this the Thirty-third Annual Meeting of the American Institute of Instruction. Since our last session, among the green hills of Vermont, we have passed another year of duty in our respective fields of labor, and have again come together to exchange, once more, friendly greetings, to renew old acquaintances and to form new ones; to listen to words of wisdom and instruction from those who have come prepared to counsel and edify us in our calling; and to have a mutual interchange of opinions and views upon matters connected with our profession, and the various aspects of the work in which we are engaged. My words of greeting, and of introduction, shall be few; that you may the more readily enter upon the appropriate work of this occasion as laid down in the programme already before you.

The year just passed, is one whose thrilling events have made it memorable for all time. Viewed in its proper relations it stands forth in the annals of our country, and, I may add of the world, unparalleled — unparalleled for its record of perfidy and treason, of political madness and fratricidal barbarity, in one part of our country; and for its spontaneous uprisings of patriotism in another part; for the persistent attempt of unholy ambition, marshalling its hosts of ignorance and delusion, to subvert the liberties of the happiest and most prosperous people of the world; and for the equally persistent determination of a free people, on the other hand, to thwart this diabolical purpose, to defend and transmit their rights and institutions, unimpaired, to their posterity, — a determination which, in the eyes of every hopeful patriot at this hour, gives the

strongest assurances that the day is not far distant when right shall triumph over wrong ; freedom over servitude ; when the eagle shall throttle the viper and quench his venom forever ; when a people so thoroughly imbued with intelligence as our own, will vindicate to the world its ability to bear aloft among the escutcheons of the great powers of the world, the palladium of its liberties, untarnished and still honored as the emblem and the hope of the FREE.

Fellow-Teachers and Educators : We have a special interest in this great struggle, over and above that which belongs to our relation as citizens of our common country in this hour of trial. As teachers and educators, we have a vital interest in the great test to which our institutions are now subjected. In the language of a foreign writer, "Democracy" — (using that term as designating a Republican form of government like our own, and not as a party name, as we in this country often use it) — "Democracy is now on trial." But it is not the political machinery alone of our government that has been put to the test. The educational policy of the Free States—the policy which commenced with the settlement of the northern colonies, and which has kept pace with the emigrant in his march towards the setting sun—the policy of educating the whole people without regard to rank or condition in life ; of giving to the child in the humblest circumstances, facilities for attaining to a degree of culture that shall fit him for the highest departments of business or most honorable stations in society—the policy of making the *whole people* the intelligent source of all the great forces in society—social, political, and moral ; and of making that people also the great conservators of power. This educational policy has been for the last sixteen months passing through its period of severest trial ; the whole civilized world has been a

deeply-interested spectator of this trial, and at this hour its issue is looked for with a breathless anxiety that well nigh suspends the political activity of the governments of the Old World.

Thus far, in the agony of the hour, how stands the test of our system of education? And how, in the light of human probability, when the crisis shall have passed, will that system have survived the terrible ordeal? I have not now the time, and it is not my purpose here to examine this question at length; but I sincerely believe, and ever with the utmost confidence, that from that unfortunate hour when the lowering storm of war burst upon us, in that ill-advised booming of cannon against Fort Sumter, down to the present moment, the whole series of events furnishes one grand and triumphant vindication of our system of popular education. Mark the contrast in the aspects of the two great parties now marshalled against each other in deadly strife. Draw a line on the map between the States loyal, and States disloyal; then take the recent occurrences on each side of that line respectively, and would it be possible, in the nature of things, the people remaining as they are, for those occurrences to exchange sides. Would the people of the South, of their own free will and accord, without conscription, swell the ranks of their army to a million *volunteers*? Would they witness on the part of their enemies unheard of exhibitions of violated faith and wanton barbarity which shock even savage nations, without being provoked to measures of retaliation? Is it within the bounds of possibility, humanly speaking, that the people of the North could be blindly led by unprincipled leaders to apply the suicidal knife to the government under which they have prospered and been protected beyond measure? Could they, even under the genius of Diabolism itself, so far divest themselves of their humanity as to plunge them-

selves into that degree of infuriated madness, that should lead them to the commission of outrages, whose enormity the strongest terms of our language fail to express?

Whence this difference? Is it pertinent to the point, that at the South, in very many cases, upon the muster-rolls which have been taken, ninety per cent. of the men have made their mark, instead of writing their own name; while on the rolls of the North, a man's mark is a rare sight, and in numerous instances whole regiments have inserted their names, each man with his own hand?

At the North the great mass of the people, with slight exception, possess a fair practical education and a good degree of intelligence. They understood the common principles and modes of business, of commerce, of the mechanic arts, and the mutual relations of the different departments of labor. Labor is generally respected, and has its reward. The people understand the general theory of our government; they appreciate its value, and recognize their own obligations and duties to it. They have long seen and understood the accursed instrumentalities of this causeless rebellion; and now, when called upon to aid in its suppression, they cheerfully pour their treasure into the national coffers, and bare their bosoms to the storm of red-handed war. And thus far, we may add, they have had too much character and too much respect for the honor of our race, to conduct the war in a manner that disgraces humanity; but it is otherwise at the South. With a privileged class, small, but well educated, and possessed of considerable culture of its kind, the masses are wofully ignorant, having very little of even a common knowledge of the world and its affairs, and with very faint conceptions of their rights and their duties, or of the nature of the contest in which they are now engaged. Of course they easily become the passive tools and deluded victims of unscrupulous leaders,

who do not hesitate to stimulate to excess their unrestrained brutal passions—the principal element upon which the rebellion now subsists. The present war is indeed a war between unlike phases of society—between degrees of civilization widely different, and in my humble judgment, totally irreconcilable.

But our final hope is, that those principles will ultimately prevail which have their source and support in the common intelligence of the people. It is a noteworthy fact that cannot have escaped your notice, that, from the beginning of this contest, the people of the North have apparently appreciated the extent and the enormity of the rebellion quite as fully as those in power; and they have certainly been as decided in their belief of the necessity of a more vigorous and emphatic policy for its suppression.

It has even been the pet theory of monarchical and despotic powers, that whenever extensive popular tumults or rebellion should endanger our State, the strength of our form of government would be found wanting; that anarchy would rule the hour, and our much boasted strength, the will of the people, would prove our greatest weakness and our ruin. To all human appearance, never was prediction farther from being verified. Anarchy is the child of ignorance. When the intellectual culture and moral tone of society are low, their passion and prejudice, and bigotry and superstition run riot, unless checked by the strong arm of military power; but anarchy never has and never will prevail among a people generally characterized, as a people, by popular intelligence. A community well informed and intelligent will hardly be in danger of becoming, as a community, corrupt or greatly vicious. The agitation of enlightened public sentiment, and the collision of trained mind with trained mind, will evolve and strengthen the nobler sentiments of our nature, which are elevating and

salutary in their offices, and will at the same time repress, or keep under subjugation at least, those lower passions which predominate most under the reign of ignorance and indolence—the common parents of some of the worst forms of vice. *Individuals* may possess great intellectual power and much culture, and yet be depraved and corrupt in the last degree. Such then have always been from the times of Alcibiades, and Catiline, down through the long gallery of historical celebrities, to Aaron Burr and more recent notorieties, whose names my pen shall never incorporate into the proceedings of the American Institute of Instruction. But with communities, as I have intimated above, general intelligence and general corruption are irreconcilable, and seldom or never occur.

It behooves us, as teachers, to remember that the real governing power in this country is public opinion, and just in proportion as that opinion is enlightened and imbued with sound principles, just so far will the government be strong; just so far will it be impregnable to violence from without, and secure against contentions from within.

We, the educators of the land, are therefore directly engaged in the great work of training, not simply scholars and members of the learned profession, but in training the people, men, women, and citizens, the future pillars and framework of a Great Republic. Let us, then, do a work that posterity shall not blush to own as a heritage from our hands; and especially let us remember that, as teachers, our work is not simply a work of hobbies, of pet theories, nor of newly-discovered short processes for reaching the goal of learning. We must know and study more the *Philosophy* of Education; and for this purpose we need a familiarity with the teachings of all history, with all the varied principles of the human mind, and all the reliable elements of human character.

Some of our professional fellow-laborers, whom we have been accustomed to see at the meetings of the Institute, will not meet us here upon this occasion. They are to-day upon the tented field, bearing the banners of our country on to victory. Some, alas, have finished their earthly labors, and now fill honored patriots' graves. Let us trust that history will do them, and the cause in which they have fallen, ample justice. Though the dark angel is brooding over our land with raven wing, filling many a home with sorrow, let us be hopeful of the issue. The issue, in fact, is not yet; but "faith is the substance of things hoped for, and the evidence of things not seen;" and my faith, (and yours, I trust,) abounds in the fullest hope of the present hour, and clearly discerns the indubitable evidence of signal triumph, foreshadowed by the bow of promise spanning the broad heavens, upheld on the one side by the strong arms of the hosts now marshalled along the Potomac, the mountains of Virginia, on the deck of the gunboat along our coast, and on the rivers of the great West; and, on the other hand, supported by the hearts of twenty millions of people, trusting in God and invoking for their children and childrens' children, the boon which they received from their fathers, and now enjoy, — the boon of FREE SCHOOLS, FREE SPEECH, AND FREE MEN.

After the address, William E. Sheldon, Esq., of West Newton, the Secretary of the Institute, proceeded to read the report of the last meeting, held at Brattleboro', Vt., but on motion of J. W. Bulkley, of Brooklyn, N. Y., the further reading was dispensed with, and the records approved.

On motion of *Mr. Nathan Hedges*, of Newark, N. J., the Chair was authorized to nominate committees, one to consist of seven members to nominate officers for the following year, — the other of five, on teachers and teachers' places.

Messrs. Hedges of New Jersey, Northrop and Adams of Massachusetts, Sawyer of New Hampshire, Allen of Connecticut, Valentine of New York, and Greene, of Rhode Island, were appointed a committee to nominate officers for the ensuing year.

A committee on teachers and teachers' places was appointed, consisting of Messrs. Bulkley of New York, Boyden and Hardon of Massachusetts, Allen of Pennsylvania, and Phelps of Connecticut.

DISCUSSION.

The Institute then proceeded to the discussion of the question — "Methods of Teaching Geography."

The discussion was opened by *A. G. Boyden, Esq.*, of the Normal School, Bridgewater, Mass. There were three things essential in teaching geography, he said, — first, a definite idea of what was to be done; second, an appreciation of the class of minds for which we lay out our work; and third, a comprehension of the natural order of presentation. Mr. Boyden thought that there should be one method pursued with children and another with those more advanced, and developed the method he would pursue with primary classes. He would try to give them ideas as to size, direction, distance, form, etc., as essentially preliminary to any competent understanding of the science. This he would do mainly through familiar oral exercises. Map-drawing from memory was represented to be an essential matter.

E. C. Hewett, Esq., of Bloomington, Ill., followed. There were two ways of regarding the earth as a subject of study, he said, — first, as a whole, going down through its various divisions to the minutiae, what might be called the analytic method; the other beginning with the minutiae and going up to the whole, or the synthetic method. We cannot follow either strictly, but he favored the synthetic. If

practicable, the best way to study geography would be to travel. The memory will retain the form of the parts of the earth seen, and associate with it all related facts. With pictures and books, he would make the study as much like travel as possible. All our ideas of geography exist in forms, and the picture of a form within the mind must be the framework upon which to grasp all associated forms and facts.

Fordyce A. Allen, Esq., of Pennsylvania, continued the discussion. He opposed the use of globes for primary classes. Children cannot comprehend the spherical form of the earth. He would not present mathematical geography to a child at all. It is impossible to make a thinking child believe that the earth is "a globe or ball," because his eye tells him otherwise. So the best way is to take his mind as it is, and teach him the minor facts about him, till he can comprehend more. A young child cannot take in the idea of the world like a globe. He is told that the world swings round like that globe, perfectly round. He goes out and finds here a mountain, there a valley, and in another place a huge boulder, and he comes to the conclusion that what his teacher told him is not exactly true. And he decides like the Irishman, that the world is filled full of "Hilly holes, and Hollow bunches." He also thought that, with descriptions of places, some slight idea of the place itself should be formed; its population, formation, etc. A mere catalogue of the place would do no more good than a mere catalogue of the curiosities in the Museum would satisfy an outsider. In studying geography at first I would give the political divisions, and simply look at the natural appearance. I would connect geography with history, and give such places as had been noted for some great deed or the birthplace of some great man; thus, by connecting the two, I think the pupil would be greatly

aided in fixing in his mind important facts about certain places.

Mr. Alfred Greenleaf, of Brooklyn, N. Y., said, — Some writer has said, —

“Count that day lost whose low descending sun
Views at thy hand no kindly action done.”

So I would say, count that lesson lost when you fail to interest your pupil in what he has been over. By some means or other I know not, I care not how, you must interest your pupils in the lesson of the day. For you to go to your class to hear a recitation in geography which you care almost nothing about, will not effect the purpose. Your apathy will be apparent to the pupils themselves; while energy and life will infuse into every voice, and you show that you are interested in what you are doing.

Mr. J. Bartlett, of the High School, New Britain, said he thought with others that forms, distances, and places should be made familiar to the mind of the scholar. Take any subject in the geography, no matter what, only strive to make it clear and plain to the mind; be sure before you leave it that it is understood thoroughly. From this you will always have a good groundwork upon which to start; a firm basis to work upon. Make relative distances familiar by practice, if possible, to the mind of the pupil.

Let every teacher understand thoroughly himself what he is to teach, and then endeavor to make it as clear as possible to the minds of his pupils.

On motion of *Mr. William E. Sheldon*, the Secretary, the subject was laid upon the table.

The President announced that the rooms of the Wadsworth Athenæum and Gallery of Paintings, also the Historical Rooms, were open to the members of the Institute.

On motion of *Charles Northend*, of Connecticut, the Institute adjourned, to meet at the Central Congregational Church, at 8 o'clock P. M.

EVENING SESSION.

The Institute met in the Central Congregational Church. The President in the chair. The minutes of the Afternoon Session were read by the Secretary, and approved.

An interesting and able lecture was delivered by Samuel Eliot, President of Trinity College, Hartford.

On motion of *Mr. Wetherell*, of Boston, the Institute adjourned, to meet the next morning at 9 o'clock, in the Vestry of the Central Church.

THURSDAY MORNING.

The Institute assembled at the Vestry of the Central Church at 9 o'clock, A. M., and was called to order by the President.

Prayer was offered by *Rev. George Trask*, of Fitchburg, Mass.

The records of the Evening Session were read by the Secretary, and approved by the Institute.

On motion of *Nathan Hedges, Esq.*, of Newark, N. J., the topic, "Methods of Teaching Geography," was taken from the table.

Mr. Dickinson, of the Westfield State Normal School, addressed the Institute. He cared less for methods than for a thorough understanding, on the part of the teacher, of the true principles in teaching. Let every teacher have his own method, if he only understood the principles. The first thing to be done in geography is to teach isolated facts; the second is to teach the causes and relations of the facts which constitute the science. The teaching of the facts is not the teaching of geography at all, necessarily, but only the communication of elementary ideas of form, distance, etc. After elementary facts are passed over, and the child begins to inquire into the causes of facts, the time comes

for a scientific course, the natural order of study being first the form, second the size, and third the surface of the earth, — then climate, latitude, productions, cities, peoples, customs, etc. He would be very careful in the matter of illustrations, so that pupils will learn to locate all countries and all places on the earth, and not on the map.

Mr. Northrop, of Saxonville, Mass., thought the thing most neglected in our teaching was relative topography. He would have the world built up around our home, and pupils in answering questions as to the direction of different places, should always be made to point to those places, thus getting and giving an idea of their location with relation to themselves.

On motion of *H. E. Sawyer*, of Concord, N. H., the subject of "Methods of Teaching Geography" was laid on the table, and the question, "How can the Study of English Grammar and of the English Language be made more Efficient and Beneficial?" was taken up. This discussion was opened by *Charles Ansorge, Esq.*, of Dorchester, Mass., who said, — This branch of study may be divided into two classes; one has reference to the five senses. This includes writing, history, geography, and philosophy; these tend to strengthen the perceptive faculties of the pupil. The other is calculated to cultivate the reflective faculties of the pupil. This includes arithmetic, geometry, and grammar. The first class relates to facts, and the other to the senses. The English language is derived from the Greek, Latin, and other languages. We should present to the scholar the changes of sound. Now what is the best way to hear lessons? Why, that course which will be most beneficial. In making a pupil commit a great deal to memory, you press him too much; you give him more than he can understand. I think the grammar we put in the hands of the scholars much too general. Books do not make the

teacher, but the teacher the book. Every teacher must lay down a course for himself. It is impossible to lay down a plan for each individual teacher. Two things they must keep in mind: first, always present facts; never start with theory. Be sure of the interest of the scholar. When a scholar loses his interest in the lesson, something is wrong. It is better to let it all go now, and begin again fresh. The main difficulty is not in large cities, where teachers have a class all of the same age and ability, and where the steps are regular. It is in small schools, where the same teacher has several classes of pupils from five to sixteen years of age. In Germany the schools are much inferior to those in this country. There the only books found in many of the country schools were the Bible, the Prayer-book, and the Creed of Saint Luther. It was from these books that the scholars were to spell, read, and become acquainted with the main rules of grammar. There the teacher had to exercise his ingenuity to improvise a grammar. But here, with increased facilities, teachers should endeavor to avail themselves of everything which can aid them in performing their arduous duties of instructing their young pupils in grammar.

Mr. Philbrick, of Boston, stated his views of grammar, and testified to the value of good text-books. He said that Massachusetts, some years ago, was led away from the true path by an enthusiast, who went for subordinating text-books and making the teacher everything. It did damage, and he was for putting good text-books into schools, and bidding the teachers use them. Take a good thorough text-book, teach it well, and you have done your duty. There is something tangible to work upon. They learn their grammar, and they know it. If they take a good book and teach it well, they do all the gentleman who has preceded me advises them to do. I do not think the principle of

teaching pupils to explain too much is the proper method of teaching. This idea of their expressing themselves is an extreme. How can they express themselves when they have nothing to say? It is for teachers to express *themselves* to the pupils; to put words into their mouths. They cannot express themselves; they want to learn what to say, and not to be made to say something of which they know nothing. I shall never forget the pain I felt when called upon to write a composition. Why, I had nothing to say. I could not write a composition. I did not know what to write about. They told me to write on *Virtue*; they might as well have told me to write a poem. Children cannot write or say anything on a subject they know nothing of. It is like wringing the blood out of the nose of a child to tell him to and make him do it. There was, some time ago, an extreme notion prevalent about spelling-books. Let them spell, they said, from the reading-books. We can easily see the consequence of this. We had a generation of very poor spellers. So if you abolish text-books in grammar, in geography, or in any other study, the results will be hurtful in the highest degree.

Mr. Northrop thought the great trouble in teaching grammar was the mechanical use of the text-books, and in the failure to cultivate the expressive faculties. The great object of grammar is to teach how to speak and write—how to express thought; and that object should be constantly in mind in using the text-book.

Mr. Philbrick did not believe the cultivation of the expressive faculties was necessarily a part of the object in studying or teaching grammar. He was told, when a boy, to write a composition on *Virtue*. He had nothing to say about virtue—he had nothing to express, and that is the case with most boys who study grammar. They have nothing to express.

Professor Greene, of Providence, thought the real defect in teaching grammar was in not making pupils realize what they study. It is easy to learn, for instance, what the text-books say about number in grammar, but the lesson on this should be a living one — illustrated until there is in the pupil's mind a perfect understanding of what number essentially is in language. The teacher needs text-books, but he needs to use them well.

Dr. Woolworth, of Albany, New York, Secretary of the Board of Regents of the University, believed in Murray's definition of grammar, that it is "the art of speaking and writing the English language correctly," and this art is taught at first through mother, nurse, and teacher. It should be their business to talk correctly and well; afterward it would be well to study grammar as the science of language.

Mr. Benedict, of New York city was in favor of committing the old, well-tried rules and formulas to memory. Murray's definition of English grammar is a landmark. It is something never to be forgotten, and something which cannot be improved. Who would think of rewriting the propositions of Euclid? No one. They have been prepared with the greatest precision of language and logical accuracy. After these rules, formulas, etc., have been committed to memory, it is the duty of the teacher to see that the pupil understands them, and this he should be at liberty to effect in his own way. It is impossible to get these rules and formulas, which he deemed essential to an available and reliable education, without good text-books. If he were going to teach either geography or grammar, he would teach them and not something else, beginning to teach a science by teaching related sciences.

The subject was laid upon the table.

Dr. Butler, Superintendent of the Insane Asylum, ex-

tended an invitation to the members of the Institute to visit "The Retreat."

J. D. Philbrick, Esq., moved that the invitation of Dr. Butler be accepted, and the Institution be visited at 4½ P. M.

On motion of *J. W. Dickinson, Esq.*, the Institute took a recess of five minutes.

At 11½ A. M., Joshua Kendall, Esq., Principal of Rhode Island Normal School, gave a lecture, after which the Institute adjourned to meet at 2½ o'clock, P. M.

AFTERNOON SESSION.

At 2½ o'clock, P. M., the Institute was called to order by the President.

The records of the Morning Session were read and approved.

The Secretary stated that a gold watch, lost by a lady member of the Institute, was found and returned by an honest servant girl—Miss Nichols, of No. 13 Prospect Street.

Major-General William H. Russell, of New Haven, Conn., was introduced as the lecturer of the hour.

The aim of the lecture was to exhibit and enforce the advantages of a military system of education.

DISCUSSION.

At the conclusion of Mr. Russell's lecture, the question, "Ought Military Instruction to be generally Introduced into our Schools?" was presented.

The subject was discussed by *Hon. J. D. Philbrick*, Superintendent of Public Schools of Boston. He said that the present generation had been reared in profound peace. The war spirit evoked by the old French and Indian wars, and by the long war of the Revolution, had died out. Peace

societies had been organized which had not only persistently denounced war, but ridiculed military training. In our Northern States it was almost as much as a man's reputation was worth to belong to a military company. We were all devoted to the arts of peace, and the accumulation and enjoyment of money. We were all unprepared to enter upon the most terrible military conflict the world has ever known. We find ourselves obliged to go into the war with the smallest stock of military talent. I will not stop to calculate the thousands of lives lost and the millions of treasure already sacrificed in consequence of our lack of military knowledge as a people. And now we know that, however this rebellion may result, this generation will necessarily cultivate the military art. Now, what is meant by a military education? There are two kinds, or grades. The first is for the rank and file, and consists mostly in physical training. The second is for those in command. The officer must be trained upon a broad, scientific basis. What have common schools or the regular run of educational institutions to do with this? Nothing, in my judgment. The officers will continue to be educated in military schools, while the common soldiers will be educated for their duty in the camp. The most of the teachers of our schools are women, and they cannot handle arms or teach the manual. Moreover, I think that punctuality and exactness can be secured without military training, provided they existed in the teacher, and unless they do exist in the teacher, nothing can be done with a military system.

The Association adjourned at 4½ P. M., to visit the "Retreat" for the Insane.

EVENING SESSION.

The Institute assembled at 7½ P. M., at the Universalist Church; the President in the chair. The subject assigned for discussion, "Ought Military Instruction to be generally Introduced into our Schools?" was reassigned for 9 o'clock, Friday morning.

Rev. B. G. Northrop read the Annual Report of the Board of Directors, which was accepted by the Institute.

At 8 o'clock the President introduced Rev. Merrill Richardson, of Worcester, Mass., who delivered an address on "Popular Education as related to National Welfare."

On motion of *Mr. Hedges*, voted to adjourn to 9 o'clock Friday morning.

FRIDAY MORNING.

The association met at 9 o'clock A. M., in the vestry of the Central Church. Meeting was called to order by the President.

Prayer was offered by Henry E. Sawyer, Esq., of Concord, N. H.

The Secretary read the records of the Afternoon and Evening Session, which were approved.

William D. Ticknor, Esq., of Boston, Treasurer, read his annual report, showing a balance of \$ 239.20 to the credit of the Institute. The report was accepted.

On motion of *Mr. Ariel Parish*, the following resolution, offered by Mr. Richards, of Washington, D. C., was taken up for consideration:—

Resolved, That the AMERICAN JOURNAL OF EDUCATION, published by Henry Barnard, LL. D., is, in the opinion of this Institute, a work of great labor and merit, presenting the most complete history of education and of educators ever published; and that it ought to be possessed by every professional teacher and friend of education.

Remarks were made by Messrs. Parish, Sawyer, Hedges, and Woolworth, and the resolution was unanimously adopted.

On motion of *W. E. Sheldon, Esq.*, the speakers were limited to ten minutes, which, on motion of *Mr. Wetherell*, of Boston, was amended, and only five minutes allowed to each person, in the further discussion of the military question.

Mr. G. F. Thayer, of Boston, said, — I have a great deal of military spirit yet in me, and had I half the vigor of body as of mind, I should be in the army now. (Applause.) But I don't think the school-room is the place to teach tactics, as there are many other things which have the precedence. You try to teach so many accomplishments that the scholars cannot spell the Lord's Prayer. Yes, sir, literally cannot spell the Lord's Prayer. First, let them learn thoroughly from the day they enter what will be of use to them in business. Where they take hold of the military drill like men, it would be well to introduce it at proper hours as a part of the exercise and recreation of the pupil.

Mr. N. T. Allen, of West Newton, said that he opposed the introduction of the drill into schools, on the ground that even at West Point the military course had a sure tendency to cause a deterioration of moral character.

Mr. Charles Northend, of New Britain, Conn., said that he thought that it was entirely wrong to think that it was impossible to have a good school without military drill. Let us stick to the old plan; teach well what we undertake to teach, and we have enough to do without teaching military drill.

Mr. J. W. Bulkley, of Brooklyn, N. Y., said that he did not see the utility of military schools, — not even of West Point. I know of no improvement to be derived from intro-

ducing military tactics into our schools. Nothing has so demoralizing an effect upon the children. It makes them proud and vain; fond of show. Military drill in our schools is wrong.

Mr. Wetherell, of Boston, said that the innovation would be a poor one. It would have a very bad influence upon children. I should oppose it root and branch. It is distracting from the other studies. I am wholly opposed to the introduction of the drill into our schools.

Mr. Parish, of Springfield, doubted the possibility of introducing it. How can we have classes of both sexes? The girls would not be aided in their studies by the noise of the drum, although it might amuse the boys. It may be introduced with advantage in one class in the private boarding-school. I am greatly in favor of introducing such gymnastics as those of our friend Dr. Lewis. Let the body be inured to hardness, and if you want the pupil to be a soldier, teach him the drill and he will make as good a soldier as if he had drilled all his life. I don't think that the drill can be introduced without serious detriment, especially where there are both sexes in the same school.

Rev. B. G. Northop, of Massachusetts, objected to it because it had a tendency to make a child a mere machine. He was strongly in favor of Dr. Lewis's gymnastics, as being vastly superior.

Mr. F. A. Allen, Chester County, Pennsylvania. I am also opposed to military education. I think that for the next twenty years we shall consider no man, who is not a military man, fit for any office. Men will think a military education as good as a position.

Mr. Charles N. Jones, of Roxbury, Massachusetts. Implicit obedience has been found fault with, because military discipline calls upon boys to give implicit obedience to every order. I think that a general knowledge of march-

ing, etc., will be very beneficial; a man may be called upon to form a procession, and it will be well to know something of military tactics.

Mr. G. E. Allen, of West Newton, called attention to the fact that all the mistakes made in the battles at the seat of war were made where West Point Cadets were in command. I not not think that any spirit can be infused into drilling with wooden guns; boys don't want to drill with wooden guns. It would not work with good effect.

Mr. W. T. Adams, of Boston. I am opposed to military drill in schools. I think that we give too much attention to military matters now. I consider gymnastics much superior for schools.

Mr. Trask, of Fitchburg. I think that the Institute is too severe upon the subject of military education. I cannot agree with you. We are a great people putting down a damnable rebellion. I am ready to go to all ends to put it down; I am ready to say blood and thunder to crush it out. We have an excellent militia. We will train it, and we have a body of defenders. I exceedingly regret the turn matters are taking. It does not seem fair to have everybody against this question. I supposed that everybody would be in favor of it, but the tide is turned square against it. I, for my part, am in favor of the introduction of military drill, at proper times, into the schools.

Mr. Alfred Greenleaf, Brooklyn, N. Y. I think military drill should be introduced as far as the ability of the teacher and the circumstances of the school will permit. It has been a matter of regret that, in this war, men have not been able to handle themselves. I think, (I speak from sound information,) that men should be drilled to handle themselves and others while in the field. They should acquire as thorough and as practical knowledge of military matters as possible.

Mr. Henry E. Sawyer, of New Hampshire. I think that it is a question of but one consideration. If it is our duty to introduce military drill in the schools, the difficulty of the thing ought not to be thought of. I do not think that military instruction makes a man either good or bad. It is what is in him. If he has good moral principles, military drill will not make him a bad man, and, if he has not, it will not make him a good one.

Mr. S. B. Woolworth, Albany, N. Y., thought it hardly possible to introduce military instruction into our schools. And, even if were introduced, whether the results would be encouraging was a question of grave doubt.

Dr. Dio Lewis, of Boston. The ethical and physiological bearings of this question are of the utmost importance. It belongs to me to say a word of military training as a means of physical culture. The English Government has recently expressed an opinion on this point. It has formally ordered that all its soldiers shall have daily gymnastic training. Notwithstanding they have practised the manual constantly for years, it has now been determined that to secure their efficiency, even in the use of the musket, other physical training is indispensable; and yet we are told that the best possible physical training is found in the manual of arms. Only those who have given no attention to the subject can entertain such an opinion. In our infantry tactics there are only a few simple motions with very little variety. A weak-chested people, we need exercises of the upper half of the body which are varied and vigorous. Every one who has discriminatingly studied the physical wants of the American people, knows they cannot be met by the military drill. In all, save the cultivation of uprightness, it is singularly deficient in the requisites of a system of physical culture adapted to a people with small weak chests.

If military instruction be introduced into our schools, girls

will receive no training. Nations which have been devoted to war have never trained their women in the military art. There are grave moral objections. The future vigor of our nation must turn upon the health of our girls; their bodily culture is the great educational problem. Girls are disinclined to exercise; they need the presence and inspiration of the more vigorous and magnetic boys. Separate the sexes, putting the boys in the yard for military manœuvres and the girls in the hall for calisthenics, and nothing but the force of authority can keep the girls up to the work. I have had a larger experience in teaching gymnastics to the young than any other person on the continent, and if doubtful of everything else, I am certain that a separation of the sexes is fatal to the physical culture of girls. I do not say that a series of dancing parties may not flourish if young men are excluded, but I am sure that gymnastic training cannot. It may succeed partially; I have been familiar with the best successes, but they have never at all realized the hopes of those intelligently interested in the subject.

Before I sit down permit me to say a word of a matter in which I am deeply interested; I refer to a national convention for the consideration of the subject of physical culture. We have national conventions to discuss the improvement of horses, cattle, sheep, and swine. Why may we not have one in behalf of our own race? I hope to see such a national meeting within a year or two. I have some thoughts and practices which I greatly desire to bring before such an assembly. Might we not thus inaugurate a great work which would result in a more vigorous nationality, and a more acceptable preparation for the great life hereafter.

On motion of *Nathan Hedges*, of New Jersey, the subject was laid upon the table, and the Institute took a recess of five minutes.

Gideon F. Thayer, of Keene, N. H. I wish to call attention to the fact that since our last meeting we have lost another esteemed friend, the Rev. Daniel Kimball. Mr. Kimball was a member of the Institute for twenty-nine years. He was ever a true friend of the Institute, and a firm advocate of the cause of education. I wish therefore to present the following resolutions expressing our deep regret for his loss: —

Resolved, That in the demise of Rev. Daniel Kimball of Needham, within the past year, the Institute has lost an old and valued member and Vice-President of the Association.

Resolved, That as a scholar, a teacher, a friend of temperance, of peace, of Christianity, and of universal goodwill to man, Mr. Kimball stood in the foremost rank of the philanthropists of our country.

Resolved, That his integrity was unimpeached, his purity unspotted, his fidelity as a citizen unrivalled, and as a husband and father, he was a model to all men in those relations.

Resolved, That we sympathize most sincerely with his suffering friends, and pray that those consolations which they severally need, under their serious bereavement, be extended to them by the benignant father of us all.

Resolved, That these resolutions be entered on the journal of the Institute, and that the Secretary transmit a copy thereof to the family of the deceased.

Mr. Parish, of Springfield. Ladies and Gentlemen of the Institute, I wish to call your attention for one moment to the fact that during the last year we have lost one of our best members, President Felton, of Harvard College. I have been requested to present this resolution upon his death. I know of no reason why I should have been selected for this duty, except that it be from the fact that I have been for the last few years a member of the Board of Education of Massachusetts and associated intimately

with him. Hence, with the mention of this fact, I am very willing to present the following resolution:—

Resolved, That in the recent death of Cornelius Conway Felton, late President of Harvard College, the American Institute of Instruction has been bereaved of one of its most esteemed and valued members.

As a scholar,—a genial associate and gentleman,—a thorough teacher,—a friend and staunch supporter of the cause of education, from the primary to the collegiate department,—a noble citizen and patriot,—his removal causes a vacancy in our deliberations and counsels which will not be soon nor easily filled.

We desire to tender to the family and friends of the deceased, our heartfelt sympathy in this their irreparable bereavement.

The *President*. I have known him as one who embraced the cause of education, and of the instruction of our country with a zeal that I have never seen in any other man. I remember the interest he felt in the cause of education in Greece, which he held next to the cause of education in our own land.

Greece was his second home; he had friends there of whom he was continually speaking in terms which betrayed the deep interest he felt in the welfare of his adopted country.

His sympathy with the sufferings of his fellow-men was of the deepest kind; and when he heard of suffering anywhere, he always expressed his sorrow, with a tenderness of feeling I have never seen in any other man. His connection with this Institute is of very long standing. I have turned to the first page of the records and I find there the name of Cornelius Conway Felton, Cambridge; present in 1830. And as he has ever been so regarded in my own mind, I trust that he will be remembered as one of our brightest members, and man's truest friend.

Mr. Wetherell also bestowed a glowing tribute upon President Felton. All who knew him, knew him to honor him; and all that had been said, and much more, was richly deserved.

L. Hall Grandgent, of the Mayhew School, Boston, then read a lecture on the "Rise and Progress of Education in Europe."

Adjourned to 2½ o'clock P. M.

AFTERNOON SESSION.

The Institute assembled at 2½ o'clock, and was called to order by the President.

Messrs. Valentine of Brooklyn, N. Y., Wilson of Taunton, Mass., and Hedges of Newark, N. J., were appointed a committee to distribute, collect, and count votes, for the election of officers for the ensuing year.

The following officers were unanimously elected:

President — A. P. Stone, Plymouth, Mass.

Vice-Presidents — Samuel Pettes, Roxbury, Mass.; Barnas Sears, Providence, R. I.; Gideon F. Thayer, Boston, Mass.; Benjamin Greenleaf, Bradford, Mass.; William Russell, Lancaster, Mass.; Henry Barnard, Hartford, Conn.; William H. Wells, Chicago, Ill.; Alfred Greenleaf, Brooklyn, N. Y.; William D. Swan, Boston, Mass.; Charles Northend, New Britain, Conn.; Samuel S. Greene, Providence, R. I.; Ariel Parish, Springfield, Mass.; Leander Wetherell, Boston, Mass.; George B. Emerson, Boston, Mass.; Nathan Hedges, Newark, N. J.; Zalmon Richards, Washington, D. C.; John W. Bulkley, Brooklyn, N. Y.; Thomas Sherwin, Boston, Mass.; Jacob Batchelder, Salem, Mass.; George S. Boutwell, Groton, Mass.; John Kingsbury, Providence, R. I.; George Allen, Jr., Boston, Mass.; Charles Hammond, Groton, Mass.; D. N. Camp, New Britain, Conn.; J. D.

Philbrick, Boston, Mass. ; Joshua Bates, Boston, Mass. ; Anson Smyth, Columbus, Ohio ; Alpheus Crosby, Salem, Mass. ; Ebenezer Hervey, New Bedford, Mass. ; B. G. Northrop, Framingham, Mass. ; George F. Phelps, New Haven, Conn. ; John C. Pelton, San Francisco, Cal. ; Henry E. Sawyer, Concord, N. H. ; William F. Phelps, Trenton, N. J. ; J. Escobar, Mexico ; E. P. Weston, Gorham, Me. ; E. F. Strong, Bridgeport, Conn. ; D. B. Hagar, Jamaica Plain, Mass. ; Hiram Orcutt, West Brattleboro', Vt. ; B. B. Whittemore, Norwich, Conn. ; Daniel Leach, Providence, R. I. ; Samuel B. Woolworth, Albany, N. Y.

Recording Secretary — Samuel W. Mason, Boston, Mass.

Corresponding Secretaries — B. W. Putnam, Boston, Mass. ; John Kneeland, Roxbury, Mass.

Treasurer — William D. Ticknor, Boston, Mass.

Curators — Nathan Metcalf, Boston, Mass. ; Samuel Swan, Boston, Mass. ; J. E. Horr, Brookline, Mass.

Censors — William T. Adams, Boston, Mass. ; James A. Page, Boston, Mass. ; C. Goodwin Clark, Boston, Mass.

Counsellors — Daniel Mansfield, Cambridge, Mass. ; C. Hutchins, Boston, Mass. ; J. W. Allen, Norwich, Conn. ; George N. Bigelow, Framingham, Mass. ; Richard Edwards, Bloomington, Ill. ; T. W. Valentine, Brooklyn, N. Y. ; J. E. Littlefield, Bangor, Me. ; Moses T. Brown, Toledo, Ohio ; Henry L. Boltwood, Lawrence, Mass. ; Joseph White, Williamstown, Mass. ; George T. Littlefield, Somerville, Mass. ; William E. Sheldon, West Newton, Mass.

The *President* said that he knew of no one more fit to conduct the new Secretary to the chair, than the old one, Mr. William E. Sheldon. (Applause.)

Mr. Sheldon. I know of no one more willing. (Laughter.)

Mr. S. W. Mason, of Boston, was conducted to his seat.

The *President* thanked the Institute for re-electing him, and said whatever work there was to be done he would try to do his best to do it.

The *President* announced that members of the Institute would visit the Armory of the Colt Manufacturing Company at 6 o'clock P. M.; also that A. G. Hammond, Esq., had invited the members of the Institute to visit his residence, after the Evening Session, to witness the "Night-Blooming Cereus" in full bloom.

Hon. D. N. Camp, Commissioner of Common Schools for Connecticut, delivered a lecture on "The Relation of the Teacher in advancing Civilization;" after the close of the lecture the Association took a recess of five minutes.

The *President* stated that he had just received a telegram from Hon. William D. Swan, announcing that he should not be able to meet with the Institute at its Evening Session.

On Motion of *Mr. Hedges*, the topic "Methods of Instruction best adapted to develop in Pupils the power of Communicating Knowledge," was taken up for discussion.

Rev. Dr. Joel Hawes made some excellent and pertinent remarks upon the subject; also expressing his unfeigned pleasure in having the Institute assemble in Hartford; he commended its objects and aims, and sincerely desired success to attend it.

On motion of *Mr. Wilson* of Taunton, Mass., the Institute adjourned to 8 P. M.

EVENING SESSION.

The Institute reassembled according to adjournment at 8 o'clock, and was called to order by the President, Mr. Stone.

Hon. Henry L. Barnard, LL. D. of Hartford, Conn., announced the death of Lorin A. Andrews, and offered appropriate resolutions in honor of his memory.

On motion of *Gideon F. Thayer*, of Keene, N. H., Mr. Barnard was requested to prepare a biographical sketch of the life and services of Mr. Andrews.

CHARACTER AND SERVICES OF LORIN ANDREWS.

[In responding to the invitation of the Institute to communicate for publication a fuller memoir of the late President Andrews, of Kenyon College, than I was able to give in the few remarks with which I announced the death of our associate, at the annual meeting at Hartford, I feel that I cannot so well embody my own convictions of his pure, earnest, and lofty character, and of his large and valuable public services as an educator and a patriot soldier, as by adopting the sketch prepared by William T. Coggeshall, Esq., for the last annual meeting of the Ohio Teachers' Association, and published in the "Ohio Educational Monthly" for November, 1862.

H. B.]

"Lorin Andrews was born in Ashland County, Ohio, on the first day of April, in the year 1819. He died at Gambier, in Knox County, on the 18th day of September, in the year 1861. His span of life was forty-three years. His boyhood was spent in labors upon his father's farm, and in acquiring what, twenty-five years ago, was a common school education in Ohio. His early manhood he devoted to collegiate studies, to the reading of law and to common school teaching. In the meridian of his manhood he was honored as an advocate for just and liberal public education; for practical service, was chosen the President of an eminent college; when the unity and integrity of his country was wickedly threatened, became a volunteer in the private ranks of its prompt defenders, was promoted by popular election to responsible rank in its service, and gave up his life cheerfully in the conscientious performance of military duty.

"As a boy — as a man — as a student — as a teacher —

as a common school missionary — as the President of Kenyon College — as a citizen — as a soldier — Lorin Andrews was honored because he was decided, energetic, and disinterested. He was ambitious, but his ambition was that of a generous, Christian heart, directed by an intelligent, active will. In unselfish selection of work — in unquestioning performance of allotted duty, he was an exemplar worthy of close imitation by every individual to whom the loving regard of associates is precious.

“To no man now living is the Ohio Teachers’ Association, and the cause of popular education, by means of it, so largely indebted as to Lorin Andrews. He was associated in active work with the men by whom that society was organized in 1847 — he was its Agent and its Missionary in 1851 and in 1852; in 1853 he was its choice for the office of School Commissioner — an office which his labors as Agent of the Association had required from the General Assembly — and in 1854 he was its President.

“As a guiding power in important committees at every annual meeting of the Association, previous to his untimely death, Mr. Andrews augmented his usefulness — deepened the love of old friends, and won new ones.

“Whenever a desperate charge on time-honored error was to be made, Lorin Andrews led it — whenever strategy was required to overcome bitter prejudice, Lorin Andrews executed it — whenever financial expedients were necessary, Lorin Andrews presented and directed them, contributing always more liberally than, in the judgment of his friends, was prudent.

“Chiefly to the self-sacrificing industry and well-directed intelligence of Lorin Andrews, assisted by the counsel and supported by the contributions of the ill-requited common school teachers of Ohio, are its people indebted for a popular awakening to the importance of improved public educa-

tion, by which — Free-graded schools in towns and villages, — a State Commissioner — Common School Libraries — Township Boards of Education — full recognition that the property of the State ought to educate the children of the State, have become provisions of statute law.

“ From the same labors, counsels, and liberality, the teachers of Ohio have derived — a Monthly Journal of Education Legislative support of Institutes — Improved school-houses, — Increased Wages — Wider-spread practical recognition — Augmented public regard.

“ When Mr. Andrews became the itinerant exponent of the forethought of the public educators of Ohio, the average wages of common school teachers were, for men \$16 per month, for women \$8; in 1854 the average wages were, for men \$23, for women \$16 per month.

“ These statistics alone suggest to every philosophic observer increased attendance of pupils, enlarged courses of study, higher grade of requirements, improving processes of instruction, and increasing public interest.

“ In a funeral discourse, when the mortal remains of him whom every teacher in Ohio loved — whose memory is precious to thousands of pupils and parents — lay in the church at Gambier, where Mr. Andrews was confirmed as a Christian, Bishop McIlvain said, —

“ ‘ It was when he was at the height of his reputation and influence in the cause of general education that he was chosen to the Presidency of Kenyon College. The condition of the College demanded just the qualities for which he was so distinguished — the talent for administration, a very sound judgment, a prompt and firm decision united with a special drawing of heart towards young men in the course of their education. The College was in no condition to offer him any temptation of a worldly or selfish kind. It was deep in embarrassment and compassed with difficulties.

He accepted the office with diffidence, but with devotedness. Its whole attraction to his mind was the opportunity it afforded of spending his life and employing what faculties God had given him in immediate connection with the interests of that section of the Church with which he was connected.

“ ‘ All the highest expectations of his administration were more than fulfilled. How entirely did he devote himself, heart and mind and body, to the work ; how pure and single were his motives and aims ; how little of self was ever seen in what he proposed or did ; what zeal and diligence, what soundness of judgment and discrimination of character, what strong determination and prompt decision, and yet what love, tenderness, kindness — what an affectionate spirit and winning manner marked his whole administration. What student ever connected therewith will not bear testimony to the constancy and faithfulness of his Christian character ? An earnest, tender zeal for the souls of those committed to his administration, was as manifest as his devotedness to the culture of their minds.’

“ This is noble testimony by one noble man to the noble characteristics of another. But in yet more touching and suggestive words did the venerable Bishop speak of his cherished friend and exalted pupil : —

“ ‘ When the conspiracy which has grown into awful rebellion and war, was yet comparatively undeveloped, Mr. Andrews had well considered his duty as a citizen in regard to it ; and in anticipation of what soon appeared, had conscientiously and quietly determined on his position. When the first call of the President of the United States for quotas of volunteer troops from the several States was made, he was the first man in Ohio whose name Governor Dennison received. He did it for an example. It was not known, it could not be anticipated how such a call under the circum-

stances would be responded to. An example of one high in the estimation of the public was of great value. He appreciated the state of the case, went to the Governor and authorized the use of his name as a volunteer; and it was published, and all the school districts of the State with which his former labors had been connected, and all the State, indeed, for his name and character were everywhere known, felt the example. He sought no military distinction. He led to the camp a company of his neighbors, expecting only to be allowed to lead them in the war. But his talents and character were appreciated, and he was placed in command of the regiment—the order and discipline of which soon became conspicuous, as also did his devotedness to the comfort and interests of his men.’

“ ‘He did not covet military distinction. He was a man of peace and quietness. But he was moved entirely by the consideration of duty to his country in the time of its great and awful trial. He said he had carefully and solemnly, before God, considered his duty; and he had prayerfully arrived at the conviction on which he was acting. Whatever may have been the doubts on the minds of some of his friends whether it were best or wisest in his circumstances, there was but one opinion of the eminent conscientiousness, the unselfish purity of motive and the exalted patriotism under which he chose his course. He did not love a soldier’s life. He shrunk with horror at scenes of blood. Human suffering anywhere caused his feeling nature to suffer. But he loved his country. He hated, as he constantly prayed against, “all sedition, privy conspiracy, and rebellion.” And therefore he felt his duty calling him to the war. Never a man went forth under the excitements and exasperations of war with less enmity in his spirit, less passion, more calmly and kindly, or with a more conscientious deter-

mination, with the help of God, to do his whole duty to all, in all circumstances. He needed no taste for military life to make him what his station required. He had the love of country — the conscience and courage of a man of God, prepared to die ; he had a spirit of faithfulness which made him earnest to learn all he had need to know, and he had an ability to learn and use all he had need to learn, in duties so new to him, which left no doubt in any mind that he would become what he is known to have been, an officer on whom his commander could rely for all that judgment, courage, coolness, energy, power of mind, and a good conscience, united to the love his men had for him, could in his grade of office accomplish.'

"The first time I ever saw Lorin Andrews, he was pleading with impressive skill for the establishment of a Normal School, under State encouragement, in Ohio. The last time I saw him he was at the head of the Fourth Regiment of Ohio Volunteers, about to march against the rebels of Western Virginia. I remember well the day when, at the head of a company of brave men, recruited by him in Knox County, he marched into Camp Jackson at Columbus. It is justly due his memory to record the fact that his example called hundreds of young men to arms under the flag of their country. Captain Andrews was regarded in camp with peculiar interest and abiding confidence. After he had been elected Colonel, he was ill from the effects of exposure to tempestuous weather, and was advised to remove his quarters from the camp. His answer was — ' My place is with my men.' He was as arduous in the study of military rules and tactics — as unhesitating, but modest, in the dissemination of Christian counsel, and in the manifestation of prayerful solicitude, among his fellow-soldiers, as he was constant and unshrinking in the performance of the commonest duties of the commander of a regiment. So decided

was the hope and faith of personal friends, and so general the public interest in his career, that when the telegraph brought word that he lay ill, in camp, on a Virginia mountain-side, the press of the State with one accord trusted that the illness might prove temporary. When that trust and the dearly cherished hopes of friends were disappointed by death, public tokens of regret, of sympathy with his immediate friends, of condolence with his family, were given with promptness, fulness, and earnestness, which testified, for all the history of our State, that a rare man had fallen in the discharge of responsible duty—that in his fall for the maintenance of just government against savage rebellion, the cause of public education—the interests of liberal culture—the welfare of men to whom he was a Christian counsellor as well as loved commander—met irreparable loss.

“ On the 26th day of August in the year 1861, Lorin Andrews was brought, from a military camp, to die within hearing of the bell whose tones first called him to service in the church where he made confession of Christian faith—which regularly reminded him of duties as a student and of responsibilities as a teacher, counsellor, and director.

“ Go with me, in thought, to those shades around which clustered the highest purposes of President Andrews's life. Stand with me by the grave, wet with many unavailing tears, on which the grass of a single summer grows luxuriantly. How does it speak to us?

“ ‘ Here lies a man, of whom the Faculty of the College over which he presided, said: “ To a powerful and clear mind, he added principles so noble, just and pure, and a temper so fearless, firm, generous, and unselfish, as to endow him to an eminent degree with the faculty of directing and improving those given to him in charge; who at no time considered self, but in war met death in his country's ser-

vice, as in peace he had devoted his life to subserve her best interests.”

“Go thou and make him thy pattern, as husband or father, as friend or teacher, as citizen or soldier. Then shalt thou be loved and honored — then shall worthy friends say: In him God’s purpose was subserved for the happiness and elevation of his fellow-men — then shalt thou contribute, in all the strength which providence did commit to thee, to the fulfilment of the highest and broadest purposes to which human will and human skill can be directed ;

“ ‘ When each man shall find his own in all men’s good,
And all men work in noble brotherhood,
Breaking their mailed fleets and armed towers,
And ruling by obeying nature’s powers,
And gathering all the fruits of peace,
And crowned with all her flowers.’ ”

On motion of *Leander Wetherell, Esq.*, of Boston, the subject assigned for discussion was laid on the table, and the following gentlemen, in speeches of five minutes each, made statements as to the progress, condition, and interests of education: Messrs. Wetherell and Sheldon of Massachusetts, Upson of New Jersey, Valentine of New York, Allen of Pennsylvania, Bulkley of New York, Kendall of Rhode Island, Richards of Washington, D. C., Hedges of New Jersey, Goldthwaite of Massachusetts, Sawyer of New Hampshire, Thayer of New Hampshire, and Camp of Connecticut.

Mr. Bulkley, of Brooklyn, N. Y., offered the following resolutions, which were adopted unanimously :

Resolved, That the thanks of this Institute are due, and are hereby tendered to the Local Committee of this city, for the provisions made for our accommodation, and the facilities enjoyed during the session.

Resolved, That those hotels which have liberally reduced their usual rates of fare, and have in various ways contributed to our pleasure and comfort, be tendered our hearty thanks.

Resolved, That our thanks be given to the following railroad and steamboat companies for free return tickets from this meeting to our homes, viz: the Eastern; Boston and Maine; Boston and Lowell; Nashua and Lowell; Wilton and Stony Brook; Essex; Old Colony and Fall River; Worcester and Nashua; Boston and Providence; Hartford, Providence, and Fishkill; New Haven, Hartford, and Springfield; Connecticut River; New Bedford and Boston and Taunton Branch; New Haven and New York; Hartford and New Haven Steamboat Companies; and the Boston and Worcester Railroad; also to the Trustees of the Centre and Universalist Churches for the free use of their respective buildings.

Resolved, That the several gentlemen who have given us lectures during the session be tendered our thanks for the same, and that copies be respectfully requested for publication.

Resolved, That our gratitude is due and heartily tendered to Dr. Butler of the Insane Retreat, for his polite invitation to visit the Institution, and for his courtesy and politeness, during the visit, thus made delightful to us all.

Resolved, That we cannot too highly commend this Institution, in view of its order and neatness, the complete adaptation of all its parts for the care, comfort and restoration of its patients, the skill and success in the treatment of the same, to the liberal patronage of the State; to the sympathy of the people; and the confidence of those whose friends may need that peculiar treatment, which this class of Institutions alone affords.

Resolved, That our thanks be hereby tendered to the Trustees of the Wadsworth Athenæum, and the Historical Society, for opening the rooms of these Institutions, and affording the members of the Institute the pleasure and profit of examining the wonders of art, ancient and modern, there exhibited.

Resolved, That we tender our thanks to A. G. Hammond, Esq., for his polite invitation to visit his house and see the "Night-Blooming Cereus" in full bloom.

Resolved, That we present our thanks to the Superintendent of Colt's Armory, for an invitation to visit the establishment, and witness the various operations in the manufacture of the celebrated *Colt's Pistol*, and other arms.

Resolved, That as patriots and Christians we regard the present state of our beloved country with the deepest interest; that we look upon the present rebellion as a most unnatural and unholy war, waged against the freest and best government under heaven; prompted by the ambition of wicked men, who are resolved on the "rule or ruin" of the inheritance of our fathers, secured to us by their labor, sufferings, and blood.

Resolved, That, with all our hearts, we sympathize with the President of the United States, in his efforts to sustain the government and our institutions, in this hour of peril; and that we pledge our lives, our property, and our sacred honor, in vigorous and prompt action, in subduing the rebellion and establishing peace.

Resolved. That our sympathies and prayers are with and for our beloved fathers, brothers, and friends in the army and navy; that we tender to them assurances of the warmest love and kindest regards; that we pledge ourselves to watch over and provide for their loved ones at home, and trust that the day may not be distant when they shall return to us, and in the bosom of their families again rejoice in the peace and prosperity of our beloved country.

William D. Ticknor, of Boston, offered the following resolution, which was adopted unanimously, by a rising vote:—

Resolved, That the heartfelt thanks of the members of the American Institute of Instruction be and are hereby tendered to Wm. E. Sheldon, Esq., for his faithful, energetic, and successful efforts to promote the interests of the Institute, during the two years he has been its Secretary.

On motion of *Mr. Hedges*, of New Jersey, the Institute, after singing the Doxology, adjourned *sine die*.

LECTURES.



LECTURE I.

CONSERVATISM IN EDUCATION.

BY SAMUEL ELIOT, PRESIDENT OF TRINITY COLLEGE.

It gives me great pleasure to meet the American Institute in Hartford. Although the particular institution with which I am connected, is closed for the summer holidays, and its members are scattered, so that they cannot unite with me in these words of greeting, I feel that I am speaking for them as well as myself in bidding you welcome. To the city in general, and to acquaintance with its citizens, you have already received a welcome from more fitting lips than mine. In a gathering like this, the whole community may well take pleasure; we look on with satisfaction, as the members of the Institute come among us to renew their intercourse with one another, to express their sympathies, to utter their counsels, and to bear their united testimonies to the magnitude of the cause to which they have pledged themselves. Nor, I may add, have they chosen an inappropriate spot for their assemblage. They find themselves surrounded by past associations as well as by present activities in the work of education. Within seven years after the settlement of this town,

and it may not have been for the first time that such an appropriation was made, thirty pounds, a very large sum for that period, were appropriated to the schools, and from that day to this, there runs the same silver thread through the Town Records, binding generation to generation in the same interests and the same sacrifices. What the schools of the present time are, and what the men who are engaged in them or in the other educational labors of the neighborhood, I may safely leave to you to discover during your sojourn, if you have not already discovered them. But I should be doing injustice to the city, as well as to my own feelings, if I did not advert, pointedly and gratefully, to the influence which the labors of one life, and that happily still in its prime, have shed not only here but elsewhere, making itself visible in generous exertions of various kinds, and now more especially identified with a Journal, worthily called the American, it might be styled the Universal, the most comprehensive of all periodicals devoted to Education.

In this presence, and the presence of so many active and successful leaders of education, it becomes me to be brief. It is but a small portion of your time that I shall occupy with some unpretending observations upon *Conservatism in Education*.

In education, as in almost every other respect, the characteristic of the Age is what is termed Improvement. Sensitive to the defects of systems, methods, and instruments, we undertake to reform them; we make one improvement here, another there; we

build improved school-houses, equip them with improved furniture and apparatus, provide them with improved text-books, and conduct them upon improved theories. Iago says he is "nothing, if not critical." The educator of to-day often acts upon much the same principle, criticises, alters or tries to alter, amends or tries to amend, as if everything with him were an open question, or rather as if it were decided that everything was susceptible of change, and of change for the better. Like the painter in one of the English parishes, who brought in his bill for "mending the Commandments, altering the Creed, and making a new Lord's Prayer," our educational reformers hold nothing to be beyond the reach of their adventurous spirit. Such a spirit easily runs to extremes; in fact it is an extreme itself. Improvement of this sort is but another name for Innovation, a process in which alteration is an essential part, but amendment not an essential one; by which things may be very much changed, indeed quite revolutionized, without being reformed. To put one's trust in innovations, whatever they may be termed, or however disguised, is to run a great risk to say the least; it is often to provoke certain disaster. Improvement respects the old as well as the new; it sees the good points as well as the bad ones in things as they are; and it preserves while it changes, as eagerly clinging to whatever is excellent in existing institutions as it willingly removes whatever is defective. But innovation, into which improvement will always degenerate, if it be made too

exclusive an object of exertion, scorns the strength as it does the weakness of the past ; it believes the past, indeed, to be in error, simply because it is the past, and hurls its glove at the feet of what it considers a corpse or an idiot, denouncing its corruptions and threatening it and them with annihilation. A course like this ends in annihilating itself. The progress it affects, so sweeping and so rapid, turns out to be a downward one, and when its descent is completed, it is in the midst of ruins. How much of the educational improvement of our times is actual improvement, and how much is mere innovation, cannot be accurately defined. Many of the changes that have been wrought, commend themselves at once and forever to our reason and our affections. Others are uncertain, and we wait to form a judgment regarding them, till time has applied its tests and brought out their real character. But there are some to be condemned without delay ; the longer they are tolerated, the deeper and the more lasting the injury of which they are capable.

Noah Webster, looking back from his old age upon his youth, said " that the instruction in schools was very imperfect in every branch, and," he adds, " if I am not misinformed, it is so to this day, in many branches. Indeed there is danger of running from one extreme to another, and, instead of having too few books in our schools, we shall have too many." " Spelling," says Dr. Humphrey, as he reviews his early experiences, " was one of the leading daily exercises in all the classes, and it was better a good

deal, I think, than it is now." My own experience disposes me to agree with Dr. Humphrey. To say nothing of what I have seen in colleges, I was once chairman of a school committee charged with the management of a High School. It was well thought of, and on many accounts deserved to be well thought of; it embraced a large range of studies, and many of them were successfully pursued. But when, at an examination of the school, the pupils were called upon to go through a simple exercise in reading and spelling, when they who had gone up into the sciences or foreign tongues, were recalled to the humbler rounds of their own language, it was as pitiable a display of ignorance as I had ever witnessed or desire to witness again. I regretted then, and still regret, having wounded any one's feelings by an act of mine, and yet I think I never did a better day's work for education, than when I joined with my colleagues on the committee in throwing the whole weight of our position against the neglect which we had discovered in regard to the old-fashioned branches of education. The improvement that would crowd these out in order to introduce Philosophies or Antiquities, is precisely what I should call an innovation, nothing less, nothing more. If, to make room for what are termed the higher studies, it is necessary to remove the so-called lower, it strikes one that the room is hardly worth the making, for, without the lower to support them, the higher must be insecure, and the more these are expanded, the larger the plan of the superstructure, the larger also and the more sub-

stantial must be the foundation. Lay this, and then the upper walls can be laid, all the loftier, all the more beautiful, all the surer to rise and still to rise, because they are symmetrical from their base.

Closely connected with the mistakes to which I have adverted, and, perhaps, as much as anything else at the bottom of them all, is the prevailing inclination to educational panaceas. "Do but adopt this method," says one theorist, "and education will come right; whatever its defects, they will be remedied; new things and old will take their proper places, and the world will be enlightened as it never was before." "Nay," says another, "you must resort to my theory; it, and it only, will correct the errors of the age." Here lies the great difficulty in the use of these comprehensive remedies; one contradicts the other, and which to choose, when both threaten equally fatal results in case they are not chosen, is a problem harder to solve than any in the highest mathematics. It reminds one of the harlequin who appeared on the stage with a parcel under each arm. "What have you under your right arm?" "Orders." "And what under your left arm?" "Counter-orders!"

There is another difficulty, and that is the ephemeral support which any one of these panaceas obtains. Each seems to be embraced, only to be abandoned; one leads to another, and that to another still, and so education advances by fits and starts, without a single fixed principle of progress. Panaceas are not real remedies, though they bear the name;

they are rather diseases requiring other remedies, and in nothing is this truer of them than in education, which has experienced far greater injury than benefit from the nostrums of the last half century. The wonder is that it has survived such treatment; that the vapor baths, movement cures, and vegetable discoveries to which it has been given over, have not entirely destroyed its constitution.

They are all wrong; of this there can be no question. If there is anything human that can be said to have fixed principles, it is surely Education. Its basis is the nature of man, physical, intellectual, and moral; and from this, in its various developments, springs, to this applies the whole educational system. Other than fixed principles may be proposed, and gather adherents; the less fixed, the more, perhaps, adhered to; but the enthusiasm which they excite is as fleeting as that of a school-boy's riot. We shall find on a little reflection, that much of the fancied improvements in education during our time, consists in the substitution of these unsteady theories for those steady ones which never ought to be tampered with, and which, however tampered with, always retain their inherent power, and soon put it forth again.

Upon this fact, and it is nothing else than a fact, the conservative in education will insist. He will urge that the principles of education are not to be improved; that we cannot attempt to improve them without injuring them; that they are not of our creation, but depend upon the same laws that control our nature and our lives. He will insist that the prin-

ciples of education are immutable, and that all we have under our control is their application. This, he will allow, may be modified, it may be rendered wiser and more efficient, or it may be rendered the reverse ; even this, therefore, requiring the utmost discretion on the part of those who would meddle with it, or reform it. I should be disposed to go even further, and argue that the principles being fixed, their application does not admit of very large or frequent variations. Such as are called for by special circumstances, by different races or different ages, by different pursuits or characters, will of course be fully authorized ; but such as spring from changing theories as to the order, the subjects, the systems of study, such as are demanded to-day and forgotten to-morrow, such as caprice rather than prudence, and the love of change rather than the love of wisdom suggests, such as these cannot be considered desirable.

Let me mention one or two of the great principles to which I have referred, and inquire into the changes of which they and their applications are properly susceptible. It will be better than to confine ourselves to general and necessarily indefinite positions.

“The primary principle of education,” says Sir William Hamilton, “is the determination of the pupil to self-activity.” This is the principle, and its application, or one of its applications, instantly follows, viz : “the doing nothing for the pupil which he is able to do for himself.” Is it possible, I ask, to improve upon such a principle as this ? Can it be enlarged ? There it stands, in all the fulness of

which it is susceptible, "the determination to self-activity." Can it be reduced? can it be abandoned? Will anything less than self-activity, or anything else than this, suffice? The name may be altered; we need not be limited to Hamilton's phraseology; but can the reality, that which the name or the phrase denotes, can that be changed? I confess that I do not see how it can be. Unless a pupil is taught to act, and to act for himself, he is taught nothing, or nothing that can take the place of what he is not taught. It is on no other principle that education, on no other that life itself can be sustained. You dress an infant without expecting him to take part in the proceeding; but when he is a little older, you teach him to dress himself; and unless he learned the lesson, and could make his own toilet, you would think him in need of the assistance to be had at a school for the feeble-minded. So the child begins by being fed; but it is a very short time that passes before he can feed himself; and unless he becomes able to do so, our apprehensions for his soundness of mind or of body are excited, and reasonably excited. The difference in merely intellectual education is one of degree, not of kind. It is a slower process, but not the less a natural one, to bring a child to that point where he can teach himself, where he knows how to learn his lesson without constantly appealing for aid, and where, after learning his lesson, he can make use of it either in his studies or in other pursuits, according to its bearings. So much for the principle, on which I need not enlarge before those

already understanding and admitting it. As to its application, or recurring to Hamilton's expression, "the doing nothing for the pupil which he is able to do for himself," an expression open to all sorts of verbal alterations, it is by no means easy to see that the application itself can be substantially changed. There are extreme positions to take with regard to it. One may urge that the pupil is able to do very little for himself, and, therefore, that his labors should be lightened by never-failing assistance, that his way must be smoothed, and his studies be rendered as attractive as possible; while another insists that the pupil can do a great deal, in fact everything for himself, if he will, and consequently that his duties may be left to him to deal with as he may, no gloss upon them, no smoothing the path, no lessening the toil. But when we turn from either extreme, when we seek a theory, or rather a practice, that will commend itself to a moderate disposition, there is much less difficulty in finding what we seek than we may have anticipated. For the whole matter reduces itself at once within the limits of one question and its answer, — that is, what a pupil can do for himself; not what he ought to be able, if he were more gifted or more faithful, but what he is actually able to do, and if you succeed in this inquiry, you have succeeded in deciding the point before you. In other words, the application of the principle is determined, not by vague generalizations, but by definite circumstances, by the cases and characters of individuals, by the wants of pupils as they

present themselves, separately and repeatedly, by the relations established between them and their teacher, — in fine, by simple facts rather than by elaborate reasonings. To generate self-activity, there must be a distinct consideration for every pupil by himself; one needs more aid, another less from his teacher; one exerts all his powers, and with the greater vigor in proportion to the obstacles against which he has to contend; another is easily discouraged, lacks intellectual as well as moral stamina, and never does justice to his natural abilities, never puts forth the whole of the strength with which he has been endowed. Thus the application of the principle varies, but it does not change; it adapts itself to cases, but it is the same application of the same principle, and we may doubt whether the application can be changed to any greater advantage than the principle.

But though education consults the individual, it does not make him its centre or its circumference. What we may call the secondary principle of education is the determination of the pupil to an activity beyond himself, or in other words, to a consciousness of his relations with others, and of his share in the privileges and the responsibilities of the race. But for this principle, not only education, but every common interest of mankind would perish in a universal isolation; age would be separated from age, community from community, man from man; the accumulations of knowledge and civilization would be scattered, institutions would be broken up, and lives be

spent in divided and fruitless labors. Such a principle as this is no more to be altered than the principle of affinity or of gravitation. We must accept it, we must respect it, whether it suits our speculations or not, and the moment we set them up against it, they are shivered. It is upon this, as much as upon any principle, that the importance of general education rests. The more general it is, the more common, in the true sense of the word, that the schools of a people are, the more our pupils are brought to a sense of their common interests and their common obligations. I have often read with reverent admiration that passage in the Massachusetts Statutes which makes it "the duty of the President, Professors, and Tutors of the University at Cambridge, preceptors and teachers of academies, and all other instructors of youth, to take diligent care and to exert their best endeavors to impress on the minds of children and youth committed to their care and instruction, the principles of piety, justice, and a sacred regard to truth, love to their country and universal benevolence, sobriety, industry, and frugality, chastity, moderation and temperance, and those other virtues which are the ornament of human society, and the basis upon which the republican constitution is structured." In no country more than in ours, is such a training required. The tendency to individuality has been far more marked among us than that to sympathy or to unity. Many educational theories have made their chief point the development of the individual, not in connection with

society, but in opposition to society, as if there were an antagonism that could not be reconciled between the interests of men collectively and those of men separately. Nowhere, moreover, is this principle of greater value than in a nation, the vast majority of whom are constantly exercising an influence, direct or indirect, upon the national destiny. "In proportion," declared Washington, "as the structure of a government gives force to public opinion, it is essential that public opinion should be enlightened." There you have precisely what is to be formed under the action of this secondary principle of education, a public opinion; not an opinion of the public, for that is another thing, but a public opinion, a common sentiment, a national standard, in contrast with that individual opinion, that private judgment, which, if carried to its logical conclusions, ends in ignorance and in anarchy. The application of this, like that of the primary principle, must vary according to circumstances, but there is no more need of sweeping reforms in this connection than in the other. Points of observation change, powers of action are different in different cases; yet it is not the application or the principle that is altered, so much as the interpreter or the administrator on the one side, and those for whom he acts, the class or the pupil, on the other. Hamlet's cloud, that was like a camel, then like a weasel, then like a whale, was one and the same cloud under all its resemblances.

If we pass to the character of education, as a system, we shall discover, I think, other inducements to take a conservative view.

We find it, in the first place, a preparatory system. It does not profess to be complete or final; it does not fix a point at which perfection is to be reached, and beyond which there can be no progress, but confesses itself a means and not an end, a process to continue through life just as that of respiration, or any other essential to existence. Have you ever attempted to refer the various projects of educational reformation, or any one of them, to this simple conception of education as it really is, and to determine the soundness or the unsoundness of the proposed reform, according to its acknowledgment or its contradiction of the conception? It is a very easy and a very decisive manner of settling a great variety of educational theories. It does away at once with all over-education, as we commonly understand that term, in other words, with forcing a pupil beyond his strength, or cramming him beyond his digestive powers. It saves the poor infant in the cradle from such treatment as Pestalozzi would have inflicted upon him in making him listen to the words in the spelling-book, "before he can pronounce a single one, so that they may be deeply impressed upon his mind by frequent repetition." It rescues the child of larger growth from being overwhelmed by a mass of studies, as fatal to his intellectual life as the ashes of Vesuvius to the doomed Pompeii. It raises the question, What shall be taught, and what left untaught? That throws us back upon another inquiry, — What is the comparative value of different objects or different methods of knowledge? — an inquiry very much

neglected by educational reformers of all kinds. Here we are led by conservative principles to fix our starting-point. We introduce into education that comparison which has been of inestimable importance in all departments of science ; we bring studies and systems face to face with one another ; we analyze, combine, and make our choice of what we shall teach or learn. It is no slight labor, as we are not long in discovering. The first step, and as it sometimes seems the last, so slow and painful is the movement, so full of momentous issues, that we hardly venture to lift the foot or to set it down. Shall we confine our motions, or extend them ? Shall we follow a practical course, as it is termed, and make our "sacred question," in the language of Rousseau, "What is the use of it ?" Or shall we move in an opposite direction, and with a sneer at the utilitarianism of the age, turn to whatever is aesthetic or imaginative, as to the only genuine elements of knowledge ? These are conflicting courses, and we must decide which of them to follow ; whether it shall be one exclusively, or more than one, if so be we may unite them. But the difficulty of choosing a system is no excuse for choosing none, or for adopting a plan whose lines are drawn at random, and filled in as unsought opportunities allow. "The so-called education," says the head master of Winchester, "which is made up altogether of various heterogeneous pieces of knowledge, none leading on to the others, none carried forward throughout the whole process to give coherency, and to form as it were a backbone to all the

rest, is really no education at all." Another great safeguard in appreciating the preparatory character of education, is this : Knowing that it does not terminate in itself, but that it is the way by which we reach a point beyond it, we grasp after that power which we feel we shall need amid the experiences of life, when teachers, books, and objects no longer work upon the mind more than it works upon them, but when it must prove its strength and test the temper which it has acquired. Montaigne used to say that he liked to forge his mind better than to furnish it ; that is, to make use of his powers rather than to train them. But they must be trained before they can be used, — the mind must be furnished before it can be forged, — and the only way to do it consistently and effectively, is to consider the faculty which we desire to develop, and then develop it, instead of harping upon separate studies or parts of any studies in themselves. It is better to educate the Taste, for example, than simply to teach the elements of Beauty or the principles of Art ; better to educate the Will, than simply to go through text-books of Mental or Moral Philosophy.

But we have not yet reached the actual object of education. The powers which we have supposed it to aim at forming, are not themselves its objects. What then ? For what is it a preparation ? " Education to Happiness," is one of the headings of a thoughtful essay not many years old. " With himself," says the writer, " your pupil is always. How important then it is whether you have given him a

happy or a morbid turn of mind ; whether the current of his life is a clear, wholesome stream, or bitter as Marah. The education to happiness is a possible thing, not to a happiness supposed to rest on enjoyments of any kind, but to one built upon content and resignation. . . . It can be taught. The converse is taught every day, and all day long. . . . A wise teacher having before him the intent to make a happy-minded man of his pupil, will try to lay a groundwork of divine contentment in him." Here we have an object worth laboring for, one to keep our energies in constant action, our sympathies in continual flow ; one to raise the standard of both teacher and pupil ; one to soften and yet to strengthen the relation between them ; one to elevate the whole tone of education and of all concerned in it. I can conceive no sadder sight under the sun than an assemblage of pupils, whatever their age, to whom this object is unknown ; for whom no kindly hand is stretched out, no kindly heart is interested, that they should be led beyond the ordinary exercises of the school or the college, to those fair prospects where a higher spirit than comes of any physical or intellectual training will have space to exert itself ; where daily labors will be crowned with peace, and daily trials soothed with trust. One of the most unhappy sketches in English literature, is Gray's Ode on Eton College, in which he dwells on the suffering and sin towards which its members are all unconsciously hastening.

“Alas ! regardless of their doom,
The little victims play ;
No sense have they of ills to come,
Nor care beyond to-day ;
Yet see how all around 'em wait
The ministers of human fate
And black misfortune's baleful train.
Ah ! show them where in ambush stand,
To seize their prey, the murth'rous band,
Ah ! tell them, they are men.”

Yes, tell them this ; and tell them, besides, what manhood is, where its strength lies, how its faith is to sustain it, how its wisdom is to guard it, amid all vicissitudes ; tell them that their lessons in language or science are not the sum of what they have to learn, that the problems of their nature, the doubts to be solved, the infirmities to be repaired, the responsibilities to be borne, the victories to be achieved, tell them that these are the greater mysteries, and that unless they study them and to some extent master them, they are uneducated, however large the laurels wreathed about their brows. This, then, is the sum of the matter, that education is to teach us how to live, and how to live happily ; if happily, then usefully, usefully to ourselves, usefully to others ; in a word, completely, or as completely as a man can live. “ To prepare us for complete living,” says a recent writer, “ is the function which education has to discharge.” And what a function it is ! What length, and breadth, and depth, and height, to it ; what varied relations, what infinite ramifications ! It fits us to be scholars, citizens, men ; it trains us as sons and fathers ; it directs our bodily powers, forms

our mental faculties, helps us to make use of the resources with which we are endowed, lifts us out of ignorance and misery, above corruption and unhappiness, and sets us where we can do our duty, and our whole duty to God and to man. What, now, has reform to do with this? Can it make or unmake the object of education, this one only comprehensive object? It can bring forward other ends, it can insist on other purposes; but do they bear the tests that we should be careful to apply to them? Not until you can invent new ends of life, can you find out new ends of education. For what we live, for that we should be educated; for what we have to do in youth, in manhood, and in old age, for that we should be prepared. Education can but prepare, as we have already seen, and it can prepare but for that end. There is but one, there can be but one, and all the reforms of all the reformers will not make out another.

But you will ask me if it follows from all this that there can be, or that I think there can be no improvements in education? Granting it is strictly a preparatory process, and that its sole aim is to fit us for life, are we to grant, you may say, that it is as unalterable as the laws of the Medes and Persians? Far from it; there is no need in avoiding one extreme to rush into another; there is no justice or wisdom in representing either the character of education as a system, or any of its principles, as inorganic or lifeless. I have pleaded for its stability; I have urged the undesirableness, or rather the impractica-

bility of attempting to do away with either character or principles ; let me now acknowledge and insist upon its flexible adaptations to every different nature and under every different management. It is as elastic as it is enduring ; it is as capable of being extended so as to embrace the widest and most divergent interests, as it is of being restricted to a single point of culture. But the improvements of which education is susceptible, do not undo its character or annihilate its principles ; they are improvements of administration, improvements in the training and influence of the teacher, improvements in the means which he uses, in himself as he uses them, not in the ends for which they are used. What an awful responsibility it is which he assumes ! He grasps these great and immutable laws, he brings all the power of his life and presence to bear upon them, and then he wields them, how nobly, or how ignobly ! how faithfully, or how unfaithfully ! either to the lasting benefit or the lasting injury of those over whom his influence extends. It is his administration that we are to reform if we would be educational reformers ; it is his doings that we are to criticise, his methods to judge, his labors to enlarge or to restrain. Cowper would have administration the test of education, or of a theory or institution of education :

“ I praise a school as Pope a government,
So take my judgment in his language dressed ;
Whate'er is best administered is best.”

We may not go quite so far with the poet, but there is no escaping the conclusion that it is the

educator rather than education which is the proper subject of educational reforms. How infinitely more practical a subject than the other ! As long as we treat of education in its theory, we are dealing with generalities, the adoption or the rejection of which, in themselves, will neither secure a good nor produce a bad effect. But the moment we touch the practice of education, the systems of the teacher, the ways of the school, the plans of school architecture or school furniture, in short the whole course of educational administration, we find ourselves in the midst of details, every one of which is of vital moment to the cause. *De minimis non curat lex*, — the law cares nothing about small matters, — is a maxim that cannot be carried into education. About such matters, education cares a great deal ; and the more it cares for them, the more beneficent its work, the more successful its results. Go into yonder Armory, with its hundreds of operatives and machines ; watch the movements of those great mazes of wheel and bar and drill, observe the supervision of the foreman, the attention of every journeyman to his part in the labor, to the adjustment of every little as well of every great process in the manufacture of the arm, and you see the secret of its efficiency, you understand why it is in demand the world over, and why its proprietor was enabled to build up a town of his own and gather its population to do his bidding. It is the same thing with the school as with the factory ; its fruits depend upon the care with which every part of their production has been directed. Think of

how much is involved in any single detail, such as the teacher's manner of putting a question ; how it may encourage or discourage the pupil ; bring out what he knows or throw him into confusion, so that he seems to know nothing ; bear him as if he were a helpless infant, or lead him as if he were able to walk upright ; excite an answer or stifle it, or contain the answer in itself ; in short, how it has to do with the daily and hourly efficiency of the school and all its members. Or reflect upon the teacher's example, and its stupendous influence for good or for evil ; how he affects the manner and the temper of his pupils without an effort of which he is conscious, except that he must be conscious of exerting or of not exerting himself to do his duty ; how his sincerity raises them, or his hypocrisy depresses them ; how his industry nerves them to a zeal otherwise incommunicable, how his negligence plunges them into an apathy of which they would never have believed themselves capable but for him. Have you ever met with Sir John Harrington's tribute to Bishop Still, once his tutor at Cambridge, " who," as he says, " hath given me some helps, more hopes, all encouragements, in my best studies ; to whom I never came, but I grew more religious ; from whom I never went, but I parted better instructed. Of him, therefore, my acquaintance, my friend, my instructor, and last, my diocesan, if I speak much, it were not to be marvelled ; if I speak frankly, it is not to be blamed ; and though I speak partially, it were to be pardoned." These are words to show the teach-

er's power, to make us examine our own use of it, to open our thoughts and our actions to the light of increasing knowledge and increasing effort. Here conservatism gives way ; here it confesses itself out of place ; here it acknowledges the office of reformation ; and yet here, still here, it pleads that reform may proceed calmly and charitably, that there be no overbearing censure, no overwhelming change, but that the teacher and his administration, with all his deficiencies, may really be reformed rather than removed, really be aided to fill his position with honor, rather than be cast out from it in dishonor. Human nature cannot be changed ; human errors cannot be avoided ; human virtues cannot be perfected ; and we may bear with one another and with ourselves, whatever reformation we may need ; the more patiently we bear and forbear, the more noble and hopeful will be the reformation.

Wherever conservatism admits, as well as where it doubts the advantages of reform, it makes one unvarying stand. It bids the reformer acknowledge the utter impossibility of reaching any point where he can secure perfection, or bring to a positive and ultimate conclusion the enterprise in which he is engaged. Education, as has been already urged, knows no such thing as finality in its processes or its results ; it looks forward, and labors on, and still on, and yet there is no end ; it must exert itself, generation after generation, age after age, and if it corrects an abuse or achieves a triumph, its progress serves to open the way to further and yet further

advances. Shall it sink, and say, Strength fails, and there is no use in striving after the unattainable? Or shall it rather, acknowledging all that can never be attained, gird itself with fresh energy, and go forth conquering and to conquer? Brethren in the common cause, it is for us to answer these questions. It is on us that the present, and if the present, then the future course of education must depend. We are the agents, we the living instrumentalities by which its tendencies are to be directed and its effects secured. If we are so rash as to assail established principles; if we perpetually vary their applications; if we change, or attempt to change, the character of education, its preparatory nature, its ultimate design, then, I think, we shall risk more, far more than we are likely to gain. Let our reforms centre in ourselves, in our spirit, our conduct, our administration of the offices to which we are called; let us summon ourselves to the bar, and put to our own listening and throbbing hearts the one searching question, *Art thou faithful?*

We live in times when responsibilities of every name and in every profession have assumed a new solemnity. Our nationality threatened, our institutions shaken, our families broken by losses on the battle-field, our children growing up to an inheritance as yet uncertain, what manner of teachers shall we be, what sort of service shall we render to education or to any interest of our country, if we do not turn our eyes with a deeper humility upon ourselves, and with an intenser affection upon the duties which we have to perform?

LECTURE II.

PROGRESS OF LEARNING IN EUROPE.

BY L. HALL GRANDGENT, OF BOSTON, MASS.

FOR many years previous to the downfall of the Western Empire, society was in a very disturbed condition. The frequent incursions of the barbarians tended to distract the thoughts of all from everything but what was connected, more or less immediately, with the preservation of their country and themselves, from these hostile inroads and assaults. The progress of society was checked. Learning, which can only truly flourish in times of peace and security, could make no further advances. The various schools and institutions of learning that had been established throughout the empire, began to suffer and decline; and when, at the commencement of the last quarter of the fifth century, Rome herself fell before the onsets of the barbarian, and all the various countries which had hitherto been more or less under her sway, met the same fate, the very foundations of all learning and civilization were apparently overturned. The municipal institutions, which had been the legacy of the old empire, were soon wholly subverted; the

bonds, which had hitherto held society together, were broken ; and all was anarchy and confusion.

But though learning had received a mighty shock, it had not yet wholly disappeared. Some of the barbarian conquerors strove to keep up the schools and institutions of the Romans ; and Theodoric, who had been educated at the court of the Eastern Empire, was himself an encourager of learning, and invited to his court, learned men from every quarter. Through his means, the rapid decline of learning was somewhat checked. But after his death, Italy shared the fate of the other nations ; the learned men whom he had drawn to his court, sought an asylum elsewhere ; and still strove, in other countries, for the means of imparting their knowledge to others. But, in the anarchy and confusion that prevailed, unsupported by the hand of authority, and left to their own resources, their exertions were without effect ; and by the commencement of the seventh century, all knowledge seems to have disappeared from the countries of Western Europe, and that period to have fully commenced, to which the moderns have given the name of the *Dark Ages*. And well do they seem to have merited this name. Except among the clergy, and a few faint glimmerings of light occasionally breaking forth, now from one quarter, now from another, and again soon disappearing, darkness was spread over the whole of Europe. All the foundations of society had been broken up ; the ties that had bound man to his country, to his town, to his neighbor, no more existed ; and it took centuries, to once more fashion

order and harmony, out of these elements of discord and confusion.

Two countries alone of Western Europe partially escaped this first shock ; and in them the elements of knowledge were carefully fostered, so that in the eighth century they were far superior — we might say, they were the only countries in which learning was encouraged, and knowledge advanced ; these were Ireland and England. The doctrines of Christianity were first preached in Ireland, about the middle of the fifth century ; and these doctrines were soon embraced by the greater part of the people. Perhaps in no other country was Christianity more readily received than in Ireland ; and no other has shown herself more grateful to the Roman See for the benefits thus conferred upon her. Bishops were appointed over the various dioceses that had been formed, monasteries were founded, and in most of the monasteries, schools were established, which, in a short time, attracted students from distant countries. While the rest of Europe was a prey to rapine and suffering, Ireland enjoyed a profound peace, so favorable to letters, and furnished an asylum for the learned of other nations. Here they were hospitably received, and generously provided for ; and they were thus enabled to prosecute their own studies, and also to aid in the instruction of others. Owing to these favorable circumstances, Ireland, from the sixth to the ninth century, was the head-quarters of the learned of Europe.

England also was peculiarly favored. The Anglo-

Saxons had already conquered the country, when Augustin, at the close of the sixth century, brought to them the knowledge of Christianity. The same course was pursued here, that had been pursued in the neighboring island ; and England also was soon in possession of excellent schools. In some of these schools, the course of study was quite extensive ; and they can boast of the names of many of those who gleaned forth amid the darkness of the period. Among these, we may mention the venerable Bede, who flourished in the first half of the eighth century, and his pupil, the celebrated Alcuin, who was educated at the school of York. The latter gives us to understand, that the course of study in this school, embraced grammar, poetry, astronomy, natural history, jurisprudence, mathematics, chronology, and the explanation of the Scriptures.

But this state of affairs did not long continue. Invasions from abroad, and dissensions at home, at length did their work. The decline was, however, somewhat stayed in England, by the exertions of the enlightened Alfred, who was himself an excellent scholar. He was also a patron of learning ; and Oxford, which was founded in the year 890, owes its existence to his exertions and liberality. In the reign of his successor, in the year 915, the sister university of Cambridge was established. These seem to have been the last efforts to stay the downfall of learning ; and a few years later, England and Ireland, which together, since the overthrow of Rome, had been the abode of literature, and the asylum of the learned,

experienced the same destiny that had overtaken the other countries of Europe, four centuries before.

But a short time previous to this, towards the close of the eighth century, order had been partially restored on the continent of Europe; new countries and kingdoms had been fashioned out of the old empire; laws and regulations had been made for the government of the people; the feudal system everywhere prevailed; and nearly the whole of Western Europe had been brought into subjection to a single ruler. Charlemagne, who deserves his title of *the Great*, far better than many to whom it has been given, was crowned Emperor of the West in the last year of the eighth century. But, previous to this, he had been busily engaged in restoring order to the many countries that were under his sway. He had sent persons to visit all the provinces of his empire, to enquire into the laws, manners and customs of the people, to rectify abuses, and to make reports to himself of everything of importance. He endeavored to soften, to civilize and to humanize his people; and knowing that nothing would more contribute to this end than the diffusion of knowledge, he had invited to his court the most celebrated men of the time. Here were to be met the learned of all countries; and in the society and converse of these, Charlemagne was accustomed to solace his mind in the evening, from the toils and anxieties of administering the affairs of his extensive government. Among others who had been induced to take up their residence at his court, was the renowned Alcuin, whom

we have before mentioned as educated at the school of York. In the year 782, after repeated solicitations, he established himself at the court of Charlemagne. This monarch immediately presented him with his whole confidence; made him his minister and friend; and entrusted to him, in particular, everything that had reference to education. Soon a school was established in the imperial palace itself; and orders were given that every monastery, and every city that was the residence of a bishop, should maintain a school, in which all who desired it might receive instruction. The whole direction of this matter was in the hands of Alcuin; he selected the teachers, arranged the course of study, and held out rewards for those who distinguished themselves in any branch.

Thus, at the beginning of the ninth century, there was a partial revival of learning in Europe, owing to the genius and liberality of this enlightened monarch. Charlemagne was still more stimulated to his encouragement of learning, by the example of his illustrious contemporary, Haroun-Ar-Raschid, the Sultan of Bagdad, who sent to him an embassy, with several curious and ingenious presents. Ar-Raschid was a patron of learning, and his court was the centre of attraction for all the learned men of the East. While Europe was sunk in the deep ignorance of the dark ages, the Moslems, under a succession of enlightened caliphs, had established schools in all parts of their dominions, in which all the branches of knowledge were diligently cultivated. The Moslems

translated into their own language the best works of the learned of other nations ; several works of the ancient Greeks have been preserved to us, solely in their Arabic translations. Ar-Raschid was one of these enlightened rulers ; and Charlemagne, emulating his zeal in the cause of learning, strove the more eagerly to civilize and enlighten his people. And he was, in a measure, successful ; as long as he lived, and held the reins of government in his vigorous hands, learning was encouraged, and the schools which he had established, flourished ; but, unhappily for the interests of learning, he perished too soon, before the schools had taken root deep enough to prosper without the fostering care of the monarch. After his death, his dominions were divided and subdivided ; his successors were more eager for self-aggrandizement than for the welfare of their people. Ambition urged them to war with each other, each striving to render himself sole master of the dominions that had so lately been held under one sway. The countries were thus desolated with war, the people impoverished and burdened with imposts, and the institutions of learning, which had been the noblest work and creation of Charlemagne, one by one declined, and at length wholly disappeared. This seems to have been a natural consequence of the dismemberment of the empire, and its subdivision into numerous states, each claiming to be independent, and each jealous of the others. No longer subject to a superior power, which was able to enforce obedience, the petty rulers of these states

exhausted the resources of their subjects in continual wars with each other ; and thus they had neither the time nor the means, even had they possessed the inclination, to establish and to foster institutions, which can never flourish except under a fixed government, and in times of peace and security.

But while the rest of Europe was thus buried in darkness, in one corner the light of science burned more brightly, and greater advances were made in learning, literature, and the fine arts, than have ever since been made by the people of that country. At the commencement of the eighth century, the Moors invaded Spain, and soon made themselves masters of the best parts of that country. Animated by religious zeal, and by the desire of subjecting the whole world to the sway of the religion of their prophet, they threatened to overrun the whole of Europe. But the victory of Charles Martel, on the plain of Tours, in the year 732, together with the jealousy of the caliph, prevented further conquests ; and they were obliged to be satisfied with the possession of the best provinces of the present kingdom of Spain. This they made the garden of Europe. Under a succession of wise and learned rulers, Spain became what she has never since been, the most learned and enlightened country of Europe. The rulers encouraged learning and learned men ; they founded schools and universities in all their principal cities, and invited the learned of every country to take up their abode among them. Even religion was no obstacle to these enlightened rulers ; and men of various creeds became professors

in their institutions of learning. In a short time the Western Arabian monarchy rivalled its Eastern parent, and even surpassed it. The fame of its celebrated schools spread throughout Europe, and such was their undoubted superiority, that Christian noblemen sent their sons and heirs from the most distant lands, to these schools for instruction. In the tenth century, Cordova became the most celebrated seat of Arab learning; the tales of the number of students who flocked to the halls of its universities seem almost incredible; here were educated many of the men whose names serve to illumine the gloom of this dark period. Geometry, Astronomy, Chemistry, Medicine, Poetry, and Polite Literature were taught by professors, drawn for the most part, from the far lands of the East, by the generosity and liberality of the Arab rulers.

But the same causes that had produced so rapid a decline in learning, upon the death of Charlemagne, produced here the same effect. The Vizier Al-Manzor, in the year 998, was defeated by the united forces of the Christian kings of Leon, Navarre, and Castile; the proud spirit of Al-Manzor could ill brook such a humiliation, after half a century of continual victories, and he fell a victim to grief and despair. His death may be regarded as the end of the Western Caliphate. The territory subject to the Moslems was, after his death, divided into a number of small, independent states, engaged in continual warfare with each other, and with the Christian princes. Cordova was no longer but the capital of a

province; and her schools, which had rendered her so famous, no longer existed. The various petty states were conquered, one by one, by the Christian princes of Spain, till at last Granada alone remained to the Moslems. Here they were enabled to maintain themselves for a long time; but, at length, this also fell; and Boabdil, its last monarch, was compelled to surrender his capital to Ferdinand of Arragon, the very year of the discovery of America by Columbus; and thus disappeared the last vestige of Moorish dominion in Spain.

While science and literature were thus flourishing among a strange people, in one corner of Europe, but little progress was made in other countries. Society was yet in too rude a state. All Europe, as we have before said, was divided into a vast number of petty states, whose rulers owed a feudal homage to some superior, and were bound to aid him in war; but, in other respects, they may be said to have been entirely independent. Each ruler was absolute in his own dominions — his will was the law. He was engaged for the most part in war; seeking either to enlarge his own dominions, or to defend himself from the attack of some ambitious neighbor. There was no security for life or property — no security for the traveller, who, urged by the desire of gain or of knowledge, desired to pass from one state to another. It is true that occasionally we find some prince, more enlightened than his fellows, who endeavored to civilize his subjects, and to promote learning in his dominions. But as there was no settled policy in

regard to this — as these attempts depended entirely upon the will of the prince, most of them failed. At this period, and for several centuries afterwards, learning was confined almost exclusively to the clergy. The order of the priesthood was, in those ages, the only refuge against the oppression of the feudal lords. Though in Europe castes have never existed, as they did, and still do exist in the East, yet, for a long space of time, during the dark ages, there were only three classes — the nobility, the clergy, and the vassals or serfs. The latter were the slaves of the former; and for centuries, there was no other method of escaping the exactions of their masters, than by entering the church. Hence, all who felt themselves prompted by the desire of knowledge, all who wished to escape the oppression to which their class was subject, devoted themselves to the church. It was from the lower class that the church was chiefly recruited; and here merit was sure of meeting its reward. In the church a place has always been found for every one; it, throughout its whole existence, has proved a sure rewarder of merit in its own ranks. Most of its popes and chief dignitaries were men who had raised themselves, by their own exertions, from the lowest ranks. No wonder, then, that the church should attract to itself all the learning of the period.

At the close of the eleventh century, a movement commenced throughout all Europe, whose effects upon learning and civilization it would be impossible to exaggerate. The various Crusades, extending through a period of a century and a half, had for their object

the recovery of the Holy Land from the hands of the Moslems. Though they failed in this object, and though countless lives were lost in the vain attempt, yet they were of the utmost value from their effects upon the advance of society. In going to and returning from the East, the crusaders passed through countries far more civilized than their own; they also brought back with them much learning, and the knowledge of many rare arts, acquired in the East and in Constantinople. And, above all, the Crusades gave a preponderating power to the several monarchs, so that they began to be in a condition to command, and to cause their commands to be respected. Governments began to be more stable; many small states being united to the crown, the same laws and customs were introduced among all. A feeling of security began to prevail, and this feeling led to exertions for improvement in every direction.

In the year 1137, the Pandects of Justinian were discovered at Amalfi, and the study of the civil law was revived. About the same period Aristotle's logic came into repute, having been recovered through an Arabic translation. These, with scholastic theology, were studied with incredible diligence, and formed the principal part of the learning of the middle ages. The scholastic theology was, for the most part, a revival of the philosophy of Aristotle. The School-men, as they were called, pushed the application of this philosophy to theology, to the utmost extent; and wasted their powers upon the most subtle questions, relating to the nature and existence

of God, the office and ministration of angels, and other similar inquiries. For the study of the civil law, several universities were established; that of Bologna became the most celebrated; and in less than a century after the discovery of the pandects, this university contained more than 10,000 students. Scholastic theology was carried to its height by the lectures and writings of the celebrated Abelard, in the first half of the twelfth century. In the middle of the same century, colleges of theology, philosophy, and law were established at Paris; but it was not till half a century later, in the year 1206, that the University of Paris was founded. At this time, also, flourished Peter the Lombard, whose *Book of Sentences* is regarded as containing the whole foundation of this theology. As we have before stated, the civil and canonical law, logic, and scholastic theology, were the chief studies during the middle ages. From the ninth to the fourteenth century, the School-men, in all their researches, were guided by two general principles: 1st, That no authority sanctioned by the Church, should be questioned; and 2d, That nothing should be attempted to be established, independently of these authorities, or which could not be reconciled with them. It will thus be seen how circumscribed was the limit of their inquiries, and why, during all these ages, their attention was chiefly devoted to metaphysical inquiries, to the almost utter exclusion of natural science.

During this whole period all books were written, and all lectures and all instruction given in the Latin

language. This was the universal language of the learned of all countries, and of all who desired to acquire knowledge of any kind. The modern languages were yet too crude, too rough, too harsh, to serve as a medium for the communication of knowledge. They were even despised by the learned ; and besides this, the number of readers in any particular nation was too limited, to recompense one for the toil and labor of composing a work in his native tongue, even had he been able to find in it suitable words to express the proper ideas. For a like reason, we find, even at the present day, almost all the elementary works treating of the Oriental or Shemitic languages, written in Latin ; the number of students of those languages in any one nation, not being sufficient to induce a publisher to print these books in any of the so-called vulgar tongues. Latin, therefore, was the first and indispensable thing to be learned in the middle ages ; not such a knowledge of it as is *generally* acquired now, but it was learned, so as to be written and spoken as a living language.

The physical sciences and mathematics appear to have made but little progress during this period. The names of but few persons have reached us, of those devoted to these pursuits. Of these few, England furnishes us with the most notable example : Roger Bacon, by far the most learned man of the middle ages, appears to have devoted himself more particularly to scientific and chemical pursuits. He flourished during the first part of the latter half of

the thirteenth century; and his acquirements were such, as, in that age, gained for him the reputation of a magician. Many discoveries and inventions of modern times are said to have been anticipated by him. Spain, also, at this time, found a lover of science and a rewarder of merit, in the enlightened monarch of Castile, Alphonsus, surnamed the Wise, who succeeded in drawing many learned men to his court, and to whom we owe the celebrated Alphonsine Tables.

At the commencement of the fourteenth century were founded the universities of Lyons, Avignon, Orleans, Perugia, and Coimbra. During this century, Italy took her place in the front rank of nations; a place which she held for a long period without dispute. Dante, whose "*Divina Commedia*" is still regarded as the greatest work of her poets, died in the first quarter of this century. Shortly before his death, were born Petrarch and Boccaccio, contemporaries and friends, whose names are as familiar to us as that of the illustrious Dante. All of these composed the works to which they owe their fame, both at home and abroad, in their native language, the Italian; which was the first of modern tongues to become a suitable instrument for the transmission of thought. Under the hands of these masters, it received a form and polish which it has since retained; and though the language has since become somewhat softer and more melodious, yet so little radical change has taken place in five centuries, that the "*Divina Commedia*," the "*Sonnets*," and

the "Decameron," can be read with nearly as much facility as works composed at the present day. It is true that these authors could not wholly divest themselves of the prejudices of their age; and they professed to regard the works which they had composed in the vulgar tongue as of but little worth; while they built their hopes of fame and immortality upon other works, composed in the Latin language. But posterity has decided: the Latin works have for ages been sunk into forgetfulness, while the Italian, for the publication of which they deemed an apology necessary, have long since taken their place at the head of Classical Italian Literature, and still form the delight and the glory of the people of Italy.

But it was not only to the improvement of their own language, that Boccacio and Petrarch devoted themselves; they were also the favorers of learning in all its branches, and were chiefly instrumental in bringing about that revival of learning which culminated a century and a half later, in the time of Leo X. Boccacio was the first of the Italians to devote himself to the study of the Greek, and through his influence, the republic of Florence granted a salary, in the year 1360, to Leontius Pilatus, who was the first Greek professor in the countries of modern Europe. Boccacio and Petrarch used their utmost efforts to promote the study of this beautiful language, and its literature, among the learned of their native land — though Petrarch himself never became a proficient in it. Yet, notwithstanding their efforts, it is said that in all Italy no more than ten votaries

of Homer could be found; and Petrarch, shortly before his death, said that the French and Germans had not yet heard of the books, and knew not even the name of Homer. But this revival of the study of Greek, was owing almost solely to the exertions of these two men; and after their death, it was neglected, and was not again revived till near half a century later, in the beginning of the fifteenth century. The study of Greek then spread rapidly from Italy, throughout Germany and France; it was not taught in Cambridge and Oxford, however, till about the close of the century, in the year 1498, under the reign of Henry VII.

Petrarch and Boccacio also turned their attention to the literature of the Romans. They, and many of their contemporaries, to whom they had imparted a portion of their zeal, were diligent in collecting and copying all the ancient manuscripts which they could reach. Previous to this time, men had been content with being able to speak and write the Latin; now they began to attend to its beauties, and the charms of its style. Some of them, by the diligent attention they gave to their favorite authors, were enabled to compose treatises in this language, that will compare favorably, in point of style, with the authors of ancient Rome. Their search for the writings of authors whose names had become known to them, was unwearied; as manuscript after manuscript became disinterred from its mouldy receptacle, and unfolded itself to their eager gaze, their joy was unbounded. The possessor of a new manuscript was the object of

the admiration, and oftentimes of the envy, of his companions. These works were too precious to be entrusted to professed copiers. The most illustrious men of Italy, at this period, themselves made copies of their manuscripts for their dearest friends. Letters are still in existence, which describe the joy of these men, at the acquisition of some new, or rather unknown manuscript, the contents of which they hasten to lay before their friends, and to inquire their opinions concerning its merits. As we may well imagine, the judgment formed of many of the Latin authors, is very different from that of the present day; the means of deciding on the beauties of style, and on the merits of an author, being then too limited; and besides, each was tempted to extol the author, whose works he himself possessed.

The revival of the study of the classics soon communicated itself from Italy to Germany; which country soon became the chief seat of classical learning, a position which it has ever since maintained. In 1365 was founded the University of Vienna; in 1386 that of Heidelberg; and in 1409 the University of Leipsic was established; and in all these institutions, the newly revived study of the Latin classics found its proper place. But Italy was still in the van; her learned men still devoted themselves with eagerness to the study of Roman literature; and at the commencement of the fifteenth century, the study of the Greek language was revived. At this time, many learned Greeks fled from the Eastern Empire, which was desolated by the Turks, to seek an asylum in the

West ; these men were cordially received in all parts of Italy, and soon the Greek was studied with the same ardor as the Latin.

Among the many illustrious names of this country, none is surrounded with a brighter halo than that of Cosmo de Medici, the founder of the noble family of that name, a merchant of Florence, whose princely wealth was lavishly bestowed in aid of all enterprises connected with learning ; whose munificent bounty was never appealed to in vain, in behalf of the unfortunate man of letters, and who did far more in the cause of learning, than his well-known descendant, Pope Leo X. His vessels visited every part of the Mediterranean ; and their masters had orders to search out manuscripts, wherever they could be found, and to use his wealth freely in their acquisition. And at this period, manuscripts, and more especially Greek ones, began to be more easily attainable. The Turks, who had gained possession of all the Asiatic provinces of the Eastern Empire, and most of the valuable ones situated in Europe, had hitherto spared Constantinople ; but they were known to regard it with longing eyes ; and the thoughtful knew that the downfall of the city could not long be delayed. Accordingly, many who possessed manuscripts, or other objects of great value, comprised in a small compass, either sold them, and remained themselves behind, or departed with their families to a more peaceful land. For this reason, the ships of Cosmo de Medici were sometimes enabled to reach Florence with a cargo, half of merchandise, and half of valu-

able manuscripts ; these manuscripts, and copies of them, were soon distributed throughout Italy, and afterwards became known to the rest of Europe. And well for the interests of learning that this was so. Amurath, the Turkish sultan, who, though fierce and revengeful, was a man of honor, and regarded his word as sacred, died ; and was succeeded by his son Mahomet II., a youth as fierce and warlike as his father, but whom no ties could bind, and whose interests and pleasures were his sole law. Upon his accession, regardless of the treaty made by his father, he determined upon the conquest of Constantinople, and in spite of the entreaties and submission of the unfortunate emperor, he invested the city, overcame all obstacles with incredible ardor, and in the short space of fifty-three days, became master of the place by storm. Thus, in the spring of 1453, was accomplished the downfall of the Eastern Empire, almost a thousand years after the overthrow of the Western. The city was given up to pillage ; the vast libraries of manuscripts which its walls contained, became a prey to the devouring flames ; and many works, whose names alone have come down to us, were irrecoverably lost. Many learned men escaped from the ruins, and retired to the various countries of Europe, where they served to stimulate and keep alive the newly awakened spirit in favor of classical learning.

But while the Turks were thus laying waste the remnants of the Eastern empire, and destroying those priceless manuscripts in which was contained

a large portion of the learning of the age, a few obscure men in the west of Europe were busied in the perfection of an invention, which immediately became the most powerful aid in the cause of learning, and which, in a few years, entirely superseded the slow and laborious process of copying by hand. As with Homer, so with the inventor of printing, — several cities claim the honor of his birth, and have erected statues to his memory ; and yet, at the present day, it is almost impossible to decide upon the real inventor. Guttenberg seems to present the best founded claims ; and the first invention dates to about the year 1434. This was at first nothing but block printing ; but soon movable wooden types came into use ; and before the third quarter of the fifteenth century had expired, printing with metallic types, as at present, was practised. The benefits of this invention have been dwelt upon so frequently and forcibly, that it will be needless for us to delay longer upon this subject ; only remarking, that it seems providential that when a love of learning had been awakened and fostered in Italy, and was rapidly spreading into other countries ; and when the want of books began to be so sorely felt — a want which was but poorly supplied by the labors of the copyists ; — at this very time, a method should be invented, by which, in a few hours, thousands of copies of the productions of an author might be produced, all exactly alike, free from the faults of an ignorant or careless transcriber, and at a price which would permit even the humblest scholar the hope of obtaining a copy.

Astronomy, which at the close of the fifteenth century was hardly more advanced than in the days of the Cæsars, was also destined to make rapid advances; and, as a consequence, mathematics, upon which it depends. Copernicus, a native of Thorn, in Prussia, was the person who succeeded in placing this science upon its true foundation. He was born about the year 1470, and devoted himself from his youth to mathematics and astronomy. By the commencement of the sixteenth century, he had convinced himself that the common or Ptolemaic system was false; that it was impossible for the planets to move in such curves as had been prescribed for their courses. By placing the sun in the centre of the system, and causing the planets to revolve around him from west to east, in ellipses more or less eccentric, he found that all their motions could be explained; and a beautiful harmony was found to reign where all had hitherto been involved in the greatest confusion. The work containing his system was not published till after his death, which took place in the year 1543; his views gradually gained adherents; and in spite of the denunciations of the Roman church, and the opposition of the most learned astronomer of his time, the Copernican system was regarded as true by most of the learned, in less than a century after the death of its author; and at the present day it is embraced by all, every discovery that has since been made only serving to strengthen it, and render its truth more apparent.

We have now arrived at the commencement of the

sixteenth century. A revival of learning had recently taken place; great advances had been made in knowledge, especially in classical literature; the modern languages had now become so moulded and fixed in form, as to become a proper instrument for the communication and preservation of thought; and an invention had been made by which thought could be preserved and transmitted to the latest times, and copies of books made with a rapidity and cheapness such as the ancients could not even have dreamed of, and which rendered the acquisition of knowledge and the possession of books possible to all. But the mind itself was yet trammelled. A church, whose authority was absolute over the greater part of Europe, claimed power not only over the consciences, but over the very thoughts of its members, and laid down principles which would have forever confined science within very narrow limits. It did not confine itself to the legitimate duties of a church, but also pretended to infallibility in matters of science and philosophy; and whoever ventured to allow his thoughts to stray beyond the narrow circle prescribed by the church, was punished as a heretic. Besides this, the church had entirely lost its original simplicity and purity. Corruptions and abuses of the grossest character, which might have passed unobserved while mankind was still buried in the ignorance of the dark ages, could not but provoke censure and shame among the enlightened of the sixteenth century. One of the greatest of these abuses was connected with the doctrine of indulgences; and it was

opposition to this doctrine and its abuses, that led the way to the Reformation. In the year 1517, Martin Luther, the great reformer, first began to preach against these abuses, and found many powerful adherents. But the church, instead of endeavoring to reform, only strove to silence Luther and his followers. The claims of the church themselves began to be discussed, and finally a large part of Germany, and eventually other countries, threw off their allegiance to the pope, and denied his authority, or that of the church, to have control over the conscience or thought of man. "It was the Reformation," says Guizot, "which, commencing with decrying religious abuses, ended in restoring freedom of thought. It was a sudden effort made by the human mind to achieve its liberty, a great insurrection of human intelligence; it excited and maintained a greater freedom of thought." These ideas were yet too new to be fully carried out, and the first reformers, though throwing off all allegiance to the pope, and demanding freedom of thought for themselves, were yet unwilling to grant it to others. Freedom of thought with them, was freedom to think as they did; and, such is the weakness of human nature, the reformers themselves frequently implored aid of the secular arm against those who were unwilling to yield to the force of their logic, and would not be influenced by their persuasions. But their principles were right, though they were themselves too weak to carry them fully into practice; and in the course of time, freedom of thought

in all matters, religious as well as scientific, came to be regarded as a natural, inherent right, by all Protestant people.

The ranks of the reformers soon embraced most of the learned men of Germany. England, also, threw off the papal yoke; and the principles of the Reformation were finding their way, more or less rapidly, into all the countries of Europe. To prove their principles, the reformers had recourse to the Scriptures in the original tongues, and this led to the study of the Hebrew, and the other Oriental languages. Luther himself made a translation of the Bible from the Hebrew into his native language; and this translation has served as the foundation of all subsequent German editions. Their principle of freedom of thought was rapidly drawing to their ranks the ardent and enthusiastic, as well as the thoughtful and the learned. The schools and colleges which they founded were filled with youth of every rank, — the course of study embraced in them being much more extensive than that of the old Catholic foundations. The Romish church saw that something must soon be done, or its downfall was inevitable. The most flagrant abuses were corrected, and thus one source of the reproaches of the reformers was cut off. But this was not sufficient; the Catholics saw that they must also find some way of preventing their youth from seeking instruction in the Protestant schools, where they ran the greatest danger of imbibing the principles, so detestable to them, of Luther and the reformers. The only way

of doing this was to render their own schools equal, at least, if not superior, to those of the Protestants; and should they prove successful in this, they hoped to become, in time, the chief educators of youth in Europe, and thus be able to mould the youthful mind to suit their purposes, and to instil into it reverence for the principles of their ancient faith.

In the accomplishment of this design, they were greatly aided by the establishment of an order, the most powerful, at one time, as also the most feared and detested of any order, that ever existed in the Romish church. A Spanish soldier, Ignatius Loyala, was severely wounded at the siege of Pampe-luna, in Spain. While confined to his bed, and during the long and wearisome process of his recovery, his mind was busy with the legends of the Catholic church, and of her ancient power and fame; and his thoughts were employed on the means of once more restoring to her her ancient prestige and glory. These thoughts gradually took shape, and soon from the brain of an excited fanatic and visionary, came forth the leading ideas on which was founded a society, whose principles contained nothing of the fancifulness of its founder, — a society formed for work in the active world, and not for retirement and meditation, — a society which soon stood at the head of the religious foundations of Europe, and proved a powerful support to the waning fortunes of the pontiff. The leading maxim of the Jesuits was absolute and implicit obedience to the commands of the pontiff, through their immediate superior; and

in return for this obedience, the pope granted them many important privileges. Their maxims and principles were very elastic, so that they were able to attract to their ranks most of those whom they thought could, in any way, be useful to them. In a very short time they became the sole educators of youth throughout Catholic Europe. The old course of study was immediately modified or abandoned; new measures were adopted, and new studies introduced; and such was their diligence and success, that their schools won approbation and applause even from those who most detested their principles. The Latin, which had been much neglected since the invention of printing, at which time the learned began to make use of the modern tongues, became among them once more a living language. Their pupils were taught not only to read and write it, as was then the custom, but to speak it — to use it habitually in all the varied intercourse and lessons of the school. And had their methods of stimulating exertion and exciting ambition been somewhat more praiseworthy, and appealed more to the better emotions of the heart, and less to the baser sentiments, we might consider their modes of instruction almost perfect. For about a century and a half, the Jesuits remained undisputed masters of education in all Catholic countries; but at length their power, their arrogance, and their infamous maxims, rendered them suspected; they were banished successively from every country, and at length suppressed by the pope. Though the order has since been revived,

it has never succeeded in regaining a tithe of its former power and influence; and the schools it has recently founded, instead of excelling, hardly equal those established under other auspices.

This rivalry between the Protestant schools and those of the Jesuits, was of the greatest advantage to the cause of learning. The best minds in both parties were occupied not only in extending the bounds of knowledge, but also in devising the best means of imparting this knowledge to others. Old abuses were swept away, and new methods of instruction introduced. Text-books were so simplified as to be able to be understood without the continual aid of a master; and the principles which had hitherto confined the Catholic mind within such narrow limits in regard to natural science, were either abandoned or so essentially modified, that from this time, Catholic and Protestant have advanced with equal step; the feeling of jealousy has entirely disappeared, and each has been benefited by the inventions and discoveries of the other.

In the latter part of the sixteenth century, and the first half of the seventeenth, flourished four men — Bacon, Brahe, Kepler, and Galileo — whose names will always occupy a front place in the temple of fame. The first of these it was who caused the downfall of the philosophy of Aristotle, and taught us to reason correctly: not as Aristotle, to first form some hypothesis, and then endeavor to explain all known facts by this hypothesis, and make them agree therewith; but first to examine carefully all

known phenomena, to see in what they agree, and how they differ, and then to form some hypothesis which will best agree with all the known phenomena. Since the days of Bacon, the inductive philosophy has become the foundation of all our knowledge, and enabled us to unfold the secrets of nature with certainty and success.

It was Kepler who discovered the three great laws of the solar system, which have become the basis of modern astronomy. Galileo, by his discoveries and his fame, was very instrumental in bringing into repute the true system of the universe; his invention of the telescope, and consequent discovery of the satellites of Jupiter, gave the death-blow to the old Ptolemaic system. Brahe, it is true, rejected the system of Copernicus; but his devotion to the cause of science was unbounded, and his observations, the most correct that had hitherto been made, were of great value to his immediate successors.

At the close of the sixteenth century, in the year 1596, was born René Des Cartes, whose system of philosophy was at one time current throughout Europe, but whose fame at the present day rests more on his mathematical discoveries. He it was who invented the method of expressing algebraical powers by indices, — a seemingly simple invention, but which remodelled the whole science of algebra. It was he, also, who by the union of two branches of mathematics hitherto regarded as distinct, — by his conception of expressing the fundamental properties of lines and surfaces by equations between the

co-ordinates, — introduced a revolution into the ancient geometry. He was also the inventor of the system of indeterminate coefficients; an invention which the development of the infinitesimal calculus has deprived of much of its importance. It is not too much to say, that without the inventions of Descartes, many of the discoveries of Newton would never have been made, and the field of mathematical inquiry would still be very circumscribed. The discovery of the laws of gravitation by Newton, and the almost simultaneous invention of Fluxions, or the Calculus, by Newton and Leibnitz, have placed in the hands of astronomers a means of arriving at that perfection which has long since placed astronomy at the head of the positive sciences. Besides this, the invention by Baron Napier, in 1614, of logarithms, and their improvement by Briggs in 1624, have shortened the tedious processes of multiplication, division, and extraction of roots, and rendered what was formerly the labor of a day, a short and easy process of a few minutes.

But it is not only mathematics and astronomy that have made such gigantic strides since the period of the Reformation; nearly all branches of philosophy and physical science have kept equal pace. From the Alchemy, the search after the philosopher's stone, and the waters of life, of the middle ages, has arisen, during the last and present centuries, our modern chemistry; the four elements of the ancients have each proved to be compound bodies, and the elementary bodies themselves have been extended to

about sixty. The philosopher's stone has been realized, though in a different manner from that anciently sought for. No sooner has any discovery in chemistry been made, than the ingenuity of man devises methods to make it practically applicable in some of the useful arts, tending to the comfort and welfare of man ; and thus chemistry may be said to transmute all she touches into gold.

All branches of literature and polite learning have also made great advances. Since the wars which succeeded the first periods of the Reformation were brought to a close by the peace of Westphalia, all the nations of Europe, Catholic and Protestant, have vied with each other in the promotion of learning. And though France still boasts of the happy age of Louis XIV., and England of that of Queen Anne, yet in no period since that time have the interests of learning been neglected. New establishments have been founded, and new facilities given to the old foundations of learning, so that they now offer means and facilities for prosecuting the higher studies, that can nowhere else be found. Besides this, almost all the countries of Europe have recently devised means, more or less efficacious, by which the people themselves may participate in the advantages of learning. The distinctions of rank have lost much of their former value, while those of merit and worth are rapidly taking their place. Special schools have also been established, in which pupils may receive a particular training, and devote their time especially to those things which will be neces-

sary for them in the art or calling to which they have determined to devote themselves. Many men of the first eminence in their respective callings, have devoted themselves to the task of simplifying knowledge, and thus smoothing the way for those who are to succeed them; and these latter, being thus enabled to master with ease and in a short time, those branches which it cost their discoverers and inventors long years of toil and research to accomplish, are thus enabled to devote more time to the further advance of science.

In the middle ages, the man who was called learned, was a proficient in all the knowledge of his day; but at the present time, such have been the enormous strides of science and of literature, that those who wish to add still to our stock of knowledge, are obliged to confine themselves to some one branch in particular, contenting themselves with a general knowledge of the rest. And it is from this division, better known and practised in Europe than in this country, that are owing the great and rapid advances that have been made in all departments of knowledge. The world can no longer produce an admirable Crichton, able to support successfully theses on all branches of knowledge, against the most renowned professors of Europe. Human knowledge has become too vast for that; and the man who should attempt it, would become but a mere smatterer in all, without being proficient in any. Instead of these universal geniuses, we now find men devoting their lives to one particular branch

of science, becoming thoroughly versed in all that pertains to that branch, and more or less familiar with the other branches that are connected with their own. At the present day, every branch of science, every department of literature, has its enthusiastic votaries, devoted especially to the advance of their own particular study; and so rapid has been the progress, so numerous and important the discoveries, that we might almost be tempted to believe with the most ardent philosophers of the preceding century, as expressed by Condorcet, that the time is now rapidly approaching, when knowledge will bring perfection to the human mind, gain the victory over bodily diseases, and prolong life to a measure even beyond that of the patriarchs.

LECTURE III.

A SUGGESTION RESPECTING THE STUDY OF NATURE.

BY JOSHUA KENDALL, OF BRISTOL, R. I.

I SEE many students in High Schools and Colleges commence the study of Nature with enthusiasm. Observation is called on to notice a new class of phenomena, wherein color and form present themselves in new and varied combinations, and symmetry and arrangement are important elements. Their curiosity is aroused; the understanding forms new notions, or conceptions. They learn the names of plants or animals before unknown to them. Here, some stop; they have noted some things new to them, and have been interested for a while. In the case of other students, the judgment brings forth its delicate balance, comparison, and the likeness and difference between species, genera, and even families, may be comprehended; abstraction and generalization are set at work, so that a synopsis of an order is, in part at least, appreciated. Most stop here. Thus far, for them, all has gone on well enough; their faculties have been trained; the study has been useful to them; they are satisfied, and yet they give up the pursuit, they scarcely know why.

We teachers are purposing just now to teach our younger pupils by object lessons, and this is well. These lessons will prepare the way for the study of Nature, which furnishes us a far better series of object lessons than man can invent. With them Nature teaches all the little boys and girls; with them she teaches, and has ever taught, crude nations in their intellectual infancy. But what then, after that?

Who has not witnessed in his pupils the enthusiasm of which I have spoken, on commencing some new study of Natural History? Who has not seen this exuberant joy, welcoming a new revelation of Nature to the soul, tone down to moderation, to indifference, to neglect? What is the cause of this? Evidently the soul is not satisfied; the food that was to refresh and invigorate it was not found. Was the fault in the nature of the study? I think not. Some minds, perhaps, are not adapted to such studies, as some ears are not to music; but these are exceptional cases. Perhaps the spirit in which the study is pursued, and the ends sought are in fault; in this case I have a suggestion to offer, the elucidation of which is the subject of this lecture. But first, a word in respect to the way we are to study Nature, and the preliminary view we should form of it.

A child is born; through consciousness it becomes aware of thoughts and feelings; reason asserts that the soul is the subject of these feelings, and thus reveals the soul to itself. The soul finds itself limited, conditioned, erring; reason at once discloses to it the infinite, the unconditioned, the holy one, — God.

Observation notes external phenomena ; reason, at once asserts the existence of substance. Thus, through the action of these three faculties, consciousness, reason, and observation, the soul becomes aware of matter, of itself, and of Deity. How is it related to these two extremes ?

The soul thinks ; reason asserts that the Infinite thinks also. Observation notes external phenomena ; can matter will, think ? reason asserts not. The soul is allied to God ; spirit is opposed to matter.

The reason reveals God as infinite in power, in duration, and in goodness. The finite cannot comprehend the infinite, and yet it longs, tends constantly to learn of Him. The soul sees itself and matter limited, conditioned ; the infinite stretches away on every side — far beyond the keenest vision. The soul knows its own thoughts ; would it could, reverently, study His. What causes, it inquires, these innumerable, constant, and mystic changes ever going on in the natural world, and upholds their orderly succession ? None is known who can accomplish this, except God.

Here then is Nature, to the soul henceforth an expression of the thoughts of God, which it perceives through observation, which it comprehends through its spiritual essence. And the soul, that is an emanation from Deity, a creation of His, as well as Nature is. Hence should arise, what on examination is found to be the case, that there is a wonderful parallelism between Nature and the soul of man, and we should expect to find in them, on viewing them

side by side, comparing them, the same thought expressed in a variety of ways, an indication of a common creator. In the mystery with which man is surrounded, an enigma to himself, confronted by that relentless sphynx, Nature, — (a sphynx until her riddle is solved,) — he gladly grasps at these parallels, to help him grope his way out from darkness into light. He joyously sets at work to study himself and Nature at the same time. A discovery in one department helps him over some perplexity in the other. He finds his faculties admirably fitted to investigate external phenomena. Observation collects the raw material, the data which memory stores away for future use. The judgment, association, and imagination, meditating, brooding over these, slowly and laboriously evolve the idea and the perception of laws, and of a harmony of the universe.

My suggestion then to those who are weary of the study of Nature, as they have hitherto pursued it, is to ponder on these analogies to which I have referred, to some of which, easily perceived, let me for a few moments call your attention. To discover similar parallels may serve to interest some, not all. These remarks are intended for amateurs in Natural History, not for those who propose by original investigation to extend the boundaries of science.

1. You enter a furnishing store and ask, we will suppose, to see ladies' collars. A box full is handed down, which you proceed to look over. Now, especially if the store is in the country, your attention will be drawn to the different styles, all modifications

of the same pattern, seen in the collection. There are deep collars, narrower ones, narrower still, until the collar is reduced to a narrow white band, passing round the neck. Then there is the needle-work; perhaps, in the older styles, it is very elaborate, covering the whole material; later, it is confined to the middle or the outer-edge; and finally, in the narrow collars, may wholly disappear. Now the ground plan of all collars is the same, containing two elements, shape and ornamentation; and yet how many changes are rung upon it, especially if the modifications all proceed from the same mind, which, in practice, may never be the case.

Again, we will suppose that you are a botanist; you gather the first buttercup that meets your eye in spring, and press it; when a different kind is seen, you preserve that also; and so you go on gathering, until you have collected the tall kind that grows in the grass, and the low species on the rocky hills; those that grow in the water, on the sides of ditches, in the woods, on the sea-shore; a white buttercup, and yellow buttercups of different shades; some with large flowers, others with small; some coarse, others delicate. When winter comes you can no more roam the woods for flowers, and so turn to your dried specimens, bring all the buttercups together, and place them before you on the table. See, all the sixteen species are but varieties of the same pattern. The central idea, the ground-plan in all buttercups is the same; its modifications make the species. And how many more items are varied in

the natural product than in the artificial ; in the one, form and ornament ; in the other, size, ornament, color, root, stem, leaf, flower, fruit, height, season, habitat, properties. The work of the finite, though after the manner of the infinite, is how inferior to it in beauty, variety, and finish. But what I would draw your attention to, is the similarity, parallelism of the methods by which, in both cases, the different styles, species, are evolved by variations from a type which exists only in thought.

2. Take a mirror, and having selected some distance, hold it directly in front of the face of a friend ; then, at the same distance, higher, lower, to the right, to the left ; now change the distance and repeat the process. Each time you get a true likeness ; you, familiar with the countenance, recognize the picture at once ; yet each view is different from every other, and how many of them could be taken ?

Thus also is it with truth presented to the mind ; each mind perceives it, though in a manner different from that of every other mind, each perhaps obtaining a true likeness ; and yet it follows inevitably that there is one who surveys not only all actual, but all possible, views of both the face and the thought, and those views are as one. So in front of a granite building, each face of the numberless crystals of mica in the stone is a mirror, which takes its pictures of every act done before it, and with the speed of light sends it off to the remotest star in the universe ; so when the speaker stands before his audience, — the truths he utters, on some produce vivid, on some faint, im-

pressions ; on others impressions indistinct, distorted, unrecognizable. Three witnesses saw the same act, yet how differently they testify ; judge and jury find it difficult to detect the common likeness that should exist in their testimony, to get a true view of the nature of the transaction.

Conversing the other day with a gentleman about the war, he, looking at it from the property point of view, complained bitterly ; I could not but acknowledge that there was truth in his remarks, but the war is to be considered from a social and a moral standpoint also.

My friend believes certain truths in religion all-important ; I, others. One believes in the Trinity, another in the Unity ; one favors Episcopacy, another is a Congregationalist. Shall we quarrel with, burn, and kill each other because we get different views of truth ? — look at different facets of myriad-sided truth ? Can we think alike ? Not till we are all born with the same constitutions, undergo the same training, and suffer the same experiences.

3. Historians point out the relation between one event in the history of a nation and others that preceded, accompanied, or followed it ; each event is a unit, yet connected with myriad others, and vitalized by the ideas and principles of the times, forms that whole which we call the history of a country. So the biographer shows us the connection and mutual influence of incidents in the life of an individual, and these connected incidents form what the writer erring, calls the life of the individual, whereas, they

are indications only of his life. So in the subtler realms of matter, the astronomer points out the mutual attractions of the heavenly bodies, and shows how each motion of one modifies that of all the others. Is there a corresponding connection between the coarser material forms of Nature? Is there in them unity and variety, dependence and independence, exhibited also so vividly that we are forced to acknowledge, here is expressed the same thought that was found written in the heavens?

Take a seedling maple, and excepting the rootlet, the whole is composed of two seed leaves, whose trunks uniting form the stem; thus far two individuals in one; next, two more leaves appear spreading above the former, which send out fibres that run down along the former fibres, prolong the root, and draw up their own nourishment; and so on through the season; each leaf is the expanded portion of an individual plant or phyton, whose fibres blending, massed together, form the trunk. The expanded portion falls in autumn, and we say the leaf dies; so also dies the part that does not fall, and which is in the trunk of the tree — dies at least in this sense, that it never after lives so intense a life as it did the first year. The next year new individuals grow around the old ones, die in their turn, and so on it may be for a hundred years. And so instead of considering a tree as a unit only, (for this also is a true way of looking at it,) we may view it as the aggregate of as many individuals as the tree for a hundred years has had leaves. So much for the one in many and the many

in one in the vegetable world ; let us pass to the animal kingdom.

The researches of naturalists reveal to us a class of animals, polyps, in some of which, exactly as in the tree, many individuals are united into one body. The free, expanded portions of these individuals, like the leaves of trees, imbibe their proper nutriment from the liquid ocean that bathes them ; their bodies uniting below form the common base that supports the colony. And here, as in the tree, the life, the well-being of the whole, is affected by the health of each part. It might also be remarked that the connection of one generation with another so apparent in the polyps, the connection of antecedent with consequent, parent with offspring, which forms so inexorable a law of Nature, really grasped in its hold the human race, but was visibly, physically, at least, set aside, for purposes best known to the Creator. For are not all embryos joined to the parent ? This connection, thus begun, between one generation and another, though broken at birth, is renewed in part, by unwilling Nature, during infancy in all the mammals. Thus are individuals and generations, whether animal or vegetable, bound together, physically as well as through the immaterial principle ; no one is wholly independent of his kind ; each one is certainly totally dependent on the power of the Creator which surrounds and upholds him. With our finite powers we may not fully comprehend this ; to believe it, is good common sense.

To the child and the savage the earth seems sta-

tionary ; but the astronomer knows that it has its daily and its yearly motions, and that the sun with all its attendant planets is rushing with amazing speed through space, towards the constellation Hercules. Besides these motions the earth has several irregularities, variations in its motions, extending through vast intervals of time, known generally to the technical astronomer alone. The three motions first spoken of, are, each of them, of nearly inconceivable swiftness ; yet still the child and the savage say that the earth is at rest ; the wise man knows that in every way conceivable we are in the hands of the Infinite.

4. Geologists tell us that in the history of the world, one dynasty of plants, of fishes, of reptiles, has lived and flourished for a certain time, and then met with total and at times sudden extinction. Such we know has been the history of empires, of schools of art and of philosophy, of systems of religion, and of individuals ; death follows birth with certain step, and with one of pretty well defined length also, in each instance. In the case of some insects this step, measured in time, may be a day, in others a season ; in the case of some mammals fifteen years, in others thirty.

In the trunk of a tree the central portions are the older ones ; going from the heart to the green wood of the present year, there is first total deadness, then sluggish life, then the circling sap of the young, green layer. Year after year the tree dies from the centre outwards, — death is separated from life by so many circling rings, like the concentric walls of a fortress

warding off the foe ; like the different strata of earth between the outward layer of life and the liquid death that seethes below. Again, take a plant with a creeping stem, as the flag-root. It is well known that the stem of this plant yearly receives an addition at one end and dies off at the other. It is the same as in the tree ; only instead of from centre to circumference, death here follows life along a line, distant from its prey some twelve inches. It might here be remarked, that as in the life of man, the present moment is emphatically his life, and his past life is, as it were, dead, yet on that the spirit, the character, such as it is to-day, is moulded, enveloping it about ; so is the present growth of the vegetable, formed around the old. Neither our civilization nor our religion is entirely separated from those of old historic nations, but both have been modified by them, — been moulded around them. So our laws, our language, our customs, and our national peculiarities are, in great part, such as they have been bequeathed to us.

5. The visual organs of some of the inferior animals are so imperfect that they are sensitive only to light, but are not endowed with vision proper. The eye of the mosquito, the fly, and of most insects, consists of an assemblage of optical tubes, perhaps in each two hundred at least, and in some as many as twenty-five thousand, each of which tubes enables the insect to see a portion only of the object looked at ; so that the insect probably sees nothing as a whole, but in parts ; it gets a patch-work view of each object, just as man, looking through his astro-

nomical, chemical, botanical, geological, and many other tubes of knowledge, gets, piece by piece, his views of that whole, Nature. Again, man with the bodily eye sees one half of each object as it is. Is there not a grade yet higher, one eye that sees everything in all its parts, qualities, relations, and tendencies? Certain it is that while on many important subjects, some men have but a vague perception which way the truth lies, while others see patches of the truth, portions of its golden meadows, and some even at rapt intervals attain to a full prospect of the glorious whole, we believe that there is One who sees truth in all, in every, and yet in but one light.

How wonderful is nature, how wonderful is man, how vastly more wonderful is the Creator of them both! And then, how blind we are! A certain gentleman in England left at his death a sum of money to be awarded to persons selected by the President of the Royal Society, each of whom was to show forth in an essay on some appropriate subject, the power, wisdom, and goodness of God. It was well, and yet it was a sad thing! for man is but as the star-fish in his perceptions; feeling after the light, is all that the most favored of us as yet can do, in regard to many topics. And then those books are argumentative, logical; they are to prove to men inductively, that God is powerful, wise, and good, as if that needed demonstration which is written throughout on man and nature, making them one broad palimpsest, the multiplicity of the tongues alone rendering the manuscript difficult to decipher. But

work on, lovers of Nature, and the race may yet attain to the felicity of seeing this truth, that God is wise, just, and good, though they see it but in parts.

For it is said by an English entomologist that each flowering plant is fed upon by six distinct species of insects. Dr. Harris estimates the number feeding on each plant in Massachusetts, as four; and taking his estimate, one thousand two hundred, of the number of flowering plants in that State, we should have in the area of Massachusetts, as objects of study, one thousand two hundred species of flowering plants, and four thousand eight hundred species of insects. But those animals and plants furnish food for birds, who destroy the one and scatter abroad the seeds of the other. Then the insects prey upon each other, and are to be studied in their relations to the food of mankind, the effect that they have on the apple crop, the corn and the wheat. Then there are the mysteries that surround the larva, the chrysalis, and the full-grown insect in so many cases; the subtle contrivances used by them for securing their prey, or to escape becoming the prey of others; the ingenious devices of Nature to accommodate each insect and each plant to its situation; the laws of the distribution of the same over the earth's surface; their relations to the extinct tribes of insects and of plants with which the strata of the earth are filled, — and many, many other ways in which they may be studied, each of which by one apt and learned could be made to show forth in a striking manner “the power,

wisdom, and goodness of God." Then, if instead of employing eight able men, as in the case of the Bridgewater Treatises, all the men in the world fit for the task should come into this town, each for his whole lifetime could easily find employment, satisfaction, and delight, in investigating the wonders of Nature within its borders, could find a life's employment in showing forth the "power, wisdom, and goodness of God" as here displayed. And this in the department of Natural History alone, without reference to those higher manifestations which metaphysical and religious inquiries would point out to us. Nay, should the whole world, through infinite goodness, be able to lay aside all labor for food and clothing, and in noble imitation of these men turn to this investigation, each on a different subject, this State alone would suffice them. And there is another fact which I hope will be brought home practically to each of us; that through the devotion of such men as Cuvier, Agassiz, Humboldt, Herschel, Gray, and many others, enough of these marvels of Nature, God's wonders I believe them, are already, in their fine school-books, within the reach of every boy and girl in the country, to keep them employed in observation and study from the age of six to sixteen,—the best way too in which they can be employed. And when I see boys smoking and drinking, or hear them swearing and yelling through the streets at night, wasting strength and substance; or when I see the attention of young girls absorbed by parties and by beaux,—ingenuousness going or gone,—I trust that the thrill of pain or of

indignation that I experience, may not seem unreasonable.

The child sees the bow in the heavens, and is thrilled with joy ; the man sees the same, but knows that the whole heavens are hung with the listed colors, making them one auroral dome of glory. Well is it for him who is made humble and joyous by his knowledge ; still his prayer is for light, — open Thou mine eyes, that I, too, may see the spirits walking about us, — may comprehend more of the wonders so thickly strewn around, but which the cares of life, the jaded body, the finite mind, the short span of life, thus far, have not disclosed to me !

6. There are persons who seem to pride themselves on being unmoved by a beautiful prospect ; who think the noblest productions of the pen, the pencil, and the chisel, as little better than effeminacy, or else as vanity and the snares of the evil one. But certainly men of most ethereal mould have produced the masterpieces of art, — Homer, Dante, Shakespeare, Michel Angelo, Titian, Raphael, Thorwaldsen, Crawford, — and beholders with souls have felt themselves exalted at the sight or at the reading ; have seemed nearer the divine, they scarce know why. Are we deceived, when prizing highly the inspiration of art, or of that portion alone of it that results from the beauty, the symmetry of the creation of the artist ?

Agas ago, before men had appeared on the earth, fishes swam in the waters. Certainly, though they had eyes, they could hardly be said to have an eye

for beauty ; yet on their scales were engravings, armorial bearings, ornamental work, so minute that they can be discerned by the aid of the microscope only. Whom were these to please? Whose love of the beautiful did they minister unto? In the cells of many of the trees of the present day are found crystals, requiring very high powers to be visible ; yet they are all fashioned with exquisite and varied symmetry and proportions. So, also, with the pollen of the myriads of plants, — each particle of the microscopic dust has its peculiar shape and its peculiar ornamentation. Whose love of the symmetrical and the harmonious do these satisfy?

Stars are there, in the heavens above us, never seen by the unaided eye. There they probably have existed for ages ; yet when the telescope at last reveals them, a few times in a century, to the eyes of a few men, they are found clothed in beautiful and sometimes pleasantly-contrasted hues, — in red and green, in golden and violet, tints. Who designed these contrasts, — conceived these colors? The beauty and symmetry just referred to could never have been made for the pleasure of mortals.

7. There was an age, wise in many vexed questions, in which the law that should govern the conduct of man to his neighbor, "Do as you would be done by," was but little considered and lightly prized. But this age is slowly, very slowly, it is true, awaking to its comprehensiveness, as evolved in theories of government, of civil and international law, and the complexity of social relations ;

and one may safely say that ages will not exhaust its fulness.

Two thousand years ago, an Alexandrian sage, Apollonius by name, cutting a cone in three different ways, studied with great acuteness the curves formed by the edges of the cone thus cut. I know not that in his subtle disquisitions on conic sections he had any practical end, as we should call it, in view. Truth, pure truth, and for its own sake, was the object of his search. How would our age, with its vulgar calls for utility, have scouted this philosopher and his pursuits; yet in his conic sections he reared one of the most perfect specimens of human thought yet known. For eighteen hundred years it remained unused; but on the revival of astronomy it served as a most important key in unlocking the mysteries of that science; and it would be no exaggeration to say that now it is an invaluable instrument in extending our knowledge of physics, especially in investigating the paths of bodies in motion, the vibrations of all undulatory media, as in the theories of sound, light, heat, waves, and the like. So the folly of one age becomes the wisdom of the next; — “The stone which the builders rejected, the same is become the head of the corner.”

8. Often, in the history of a science, it has happened that a time has come when those conversant with its details have seemed to be on the eve of making some great discovery, or, after one has been made, have seen how near to it many men had been, and yet missed it. These discoveries relate to the

finding out of laws, — forms of thought which have been clothed by the Creator in material forms ; and men have, by the progress and the multiplicity of such discoveries, been led in part to appreciate the multitude of mysteries kept in reserve by Nature, waiting to reward the search of the patient investigator. But it is a fact calculated to raise amazingly our wonder at the exhaustlessness of the domains of thought yet unexplored, that certain curves have been discovered, by means of the calculus, which are thought not only to have received no expression in nature, but which, probably, from the nature of things, never can be developed in a material form, and may, perhaps, never exist but as thoughts, conceptions of the Creator, which in some fortunate moment have been revealed to the mind of man.

9. We see everywhere about us in the natural world conflicting agencies constantly at work. Inertia, gravity, friction, heat, electricity, chemical affinity, and the vital principle, keep up a constant warfare ; preservation and destruction, tearing down and building up, are going on continuously. Temperature, clouds, landscape, plants, and animals, alike, hourly, daily, yearly, change. This prostrate trunk stood erect for two hundred years in the forest ; now, its mould nourishes these humble plants. This smooth, rounded pebble is itself the record of some fierce contention, wherein tempest, breakers, beetling cliffs, and the patient centuries, in full vigor wrestled with each other. My eye glances over the prospect before me ; in one generation how changed will be

many of the objects upon which it rests ; in a thousand generations, even the streams and rolling hills may have disappeared ; whether or not the ocean will roll above them, who can tell ? In the organic world the great destroyer, that which slays and also removes the offal, is that invisible, tasteless, inodorous gas, oxygen. In its destructive operations it far outdoes all spiders, hawks, sharks, and other living agents of destruction known. Yet oxygen when under the sway of the living principle, is the chief instrument in vivifying what, when life departs, it so ruthlessly destroys ; no plant, no animal, can live without it, yet it finally totally annihilates both.

So in the human soul there is the will, which, working in obedience to conscience, the life of the soul, produces those fair temples of intellectual or of spiritual beauty which we at times behold ; but, working uncontrolled, causes that dreadful havoc of which so many are sad examples. When the controller, conscience, is deposed, the soul is at war with itself ; the will, which in its liberty and docility was its chief glory, now in its license, becomes the soul's ruin.

10. The agave, or century plant, often found in our conservatories, remains almost unchanged in aspect for years, attracting no attention. " Suddenly, however," says Mr. Gray, " it sends up a flowering stalk, which grows day after day at the rate of a foot in twenty-four hours, and becomes about six inches in diameter. This, supposing the cells to average $\frac{1}{300}$ of an inch in diameter, requires

the formation of over twenty thousand millions of cells in a day." Then follow the flowers; their beauty, collective size, and sudden appearance, attract a whole neighborhood to the spectacle. Had Nature, in her own good time, at once endowed this plant with new powers, so that it could produce all this beauty at once, a nine days' wonder? The botanist replies, that for many years it had been patiently storing away, in the thickened bases of its leaves, the material to be afterwards elaborated into the wondrous flowers; by and by, when its stores had been sufficiently accumulated, after preparation had been made, followed the exhibition.

So, at times, on sinking ocean steamers, in cities visited by pestilence, in great commercial crises, or at the critical moment in battle for some decimated regiment, the characters of men and of women suddenly bloom forth in so unlooked for, touching, heroic, and beautiful traits of character, that a whole nation, not a neighborhood merely, is thrilled with admiration; for it hears of patience, of unshrinking firmness, of lofty trust, of entire forgetfulness of self. But husband or wife, son or daughter, friend or neighbor, had they been discriminating, could tell you that long before, in the daily trials and vexations of life, as well as in its joys, had the materials for that beautiful development been gathered; that time and occasion determined the season only of its lovely unfolding.

11. Sometimes parallels not so gratifying are met with. Consider for a moment the destruction

of the young of plants and animals, or of their ovules and ova. The ovary of the oak contains three cells, each with two ovules, the rudiments for the formation of six acorns; the rule is, that one of these is developed, five are not. The ovary of the buck-eye, and of the horse-chestnut also, contains six ovules; two only, and often but one, are ripened. There are similar facts in regard to the ovules of the beech, the elm, and other trees. Now, in the case of the oak, Nature seems to have designed that there should be produced from each flower six acorns; there forms but one, and so at the very outset, Nature seems balked, frustrated in her plans. To what purpose is this waste? So also with the other trees mentioned, and exactly similar facts hold true with regard to the ova of animals; plans frustrated, intentions balked, are found everywhere. But let us look a little further. Suppose one in every six ovules on the oak to escape all dangers of blight and frost, to develop and ripen, and is now a full-grown acorn; what proportion of all those on the tree will become oaks a hundred years old? Probably not one in a million. And yet their structure points indisputably to the fact that Nature intended that they should germinate and grow.

Look, say some, and the analogy is very close; see the waste there is also among the lives and souls of men. Of those that are born, how many die in infancy, their destiny apparently unaccomplished; how many more meet with seeming moral death. Here, much more than among plants and the lower

animals, destruction rejoices as in its peculiar home ; and for the millions of dwarfed, distorted, crushed, and degraded human beings, we see one well developed, mature old man of eighty, the oak of a century. See, also, the vast phalanx of the heathen, the corrupt and depraved of our large towns and cities ; once in a while only, a Christian. But without pursuing this thought further, go into the studio of the expiring artist, of Crawford or of Allston ; into the office of the statesman, the counting-house of the merchant, or the study of the scholar, of Hugh Miller, of Macaulay, and of Buckle, — still you find written on each and on all, unfinished, undeveloped.

12. One characteristic of men of genius, as they are called, is susceptibility, — sensitiveness. It is well known that in the history of most of the sciences, many broad, general, and pretty evident truths and laws were soon established. Phenomena were nevertheless observed difficult to account for. They seemed of slight importance often, yet, when better understood, were found to have vast and important bearings on many departments of science. Who would have supposed that the swinging of a lamp, the twitching of a frog's leg, the peculiar action of amber when rubbed, the life of the loadstone, could, when noticed by minds susceptible, impressible, serve as keys to our present knowledge of the pendulum, galvanism, electricity, and magnetism, their applications to the arts, and their influence on the other sciences? Very long is the list of phe-

nomena in science and in metaphysics now known to be waiting for explanation, to say nothing of those of which we are ignorant that we are ignorant. Who fathoms the mysteries connected with the vital forces of plants and of animals? Explain that force that arranges the leaves of the maple opposite each other on the stem? of the corn alternately? of the apple-tree in a spiral? What power develops the shell of the nautilus or the ammonite in a spiral, and assigns the just proportions to their many chambers? Explain monomania, somnambulism, dreams, mesmerism, the psychological phenomena exhibited by the crazy or delirious in their ravings. What is the origin of thought? Now to solve these mysteries, not learned men alone are needed; probably their nature will be unfolded by educated rather than by ignorant men, but something must be added to the learning, powerless in itself; I mean susceptibility. The magnet is susceptible to a delicate influence residing in the earth; other bodies reside within the sphere of its action, but, apparently, are not affected by it. The evening primrose is susceptible to an influence that causes it to open at about sunset each day, while other plants are differently affected, and close at about nine in the morning. Many insects divine, long beforehand, changes in the weather, and by their uneasy movements indicate the coming storm. The skin of the human body is sensitive to the slightest appulse of air, but it can be hardened so as to be nearly without feeling; and it would seem as if the soul also, in the state of infancy, is

susceptible to slight influences that the indurated soul of the adult does not perceive. And is it not true that men of genius resemble little children in one respect, that they keep their souls sensitive, so that the thrill imparted by the falling apple not only affects the physical world in the remotest regions of space, but striking on the soul of a Newton, its influence is acknowledged, and he obtains a clew to some of his discoveries? And it might be added, is it not true that he who would be fertile in thought, be a good citizen, a Christian, must cherish that quality of which the primrose and the magnet show that Nature is possessed?

13. These analogies, and thousands of others, have been perceived by the thinkers of the past, by the poet, the essayist, the statesman, the preacher, and have been used by them to illustrate the truths they wished to enforce. Perhaps they have regarded them in themselves as mere fancies, useful for illustration only, and have not been aware that the similarity exists, because, and in so far only, as the parallels are the offspring of the same thoughts differently expressed.

The soul of man, though finite, resembling the infinite, is fitted to perceive these analogies, even when it is not aware of their origin. He who, without being drawn aside by the illusions of honor, glory, or of riches, gazes into the depths of his own soul, or diligently studies Nature, whether he be a Shakspeare, Dante, Bacon, Newton, or Humboldt, gives us the clearest transcript of truth. We want

faithful men ; men who will report accurately what they see of the divine, either within or around them ; so that from all the views combined, we, insects with patch-work vision, may get as full and correct a knowledge as possible of Him, who to the soul is all knowledge, all joy ; and for this we need calm, unruffled, and meditative minds.

The seer walked forth in the blaze of day, but the flashing bosom of ocean, rippled by the breeze, reflected an unsteady and broken image of the outer world. At the still close of day the whole coast was mirrored in the flood, which had its sands, stones, grass, and trees each more lovely than those above. Later, there could be seen reflected the moon and stars. He gazed intently downwards into the flood, for he knew that could he draw aside as a curtain the glories that met his view, could withdraw the light of the moon and nearer stars, the island universes, swimming in the immensity beyond, would be revealed to him, in all their glories of color, of grouping, and of number ; — and the tide rose higher, both in the ocean at his feet, and in the ocean of thought within him.

When grasping at gain, honor, or power ; when smarting under supposed insult or wrong, when excited by any strong passion, how difficult to judge accurately of what is fair, just, honorable, unselfish, and right. Judgment is dethroned ; what we imagine, what we hope or fear, is confusedly blended with realities. The waves of passion subside ; how clearly and sadly truth is beheld by reflection in the depths of consciousness.

In the ardor and impatience of youth, dazzled by the glittering prizes that hope and fortune hold up to our view, we hurry on, rash, heedless, and unreflecting. But when experience and age have sobered us, in the calm evening of life, meditation walks forth to contemplate truths now clearly discerned in the tranquil depth of the soul.

External phenomena, thrusting themselves on our notice at every turn, are so attractive that they draw largely on our attention. Our desires and affections, active and imperious, have always claimed a large share of the philosopher's speculations. But when this group of noisy and pretentious claimants has been for the time disposed of, and we turn to contemplate the intuitive reason, truths primal, necessary, and incontrovertible, are there discovered.

We study Nature; urged on by curiosity, we hurry in quick succession from one hue, form, principle, plan, and group, to another; each new object absorbs our attention. Wearied at last we lay them all aside, to rest and to ponder on them and on our own being. Then many of the grand truths and laws of Nature come to our minds with a new and peculiar significance.

LECTURE IV.

THE RELATION OF THE TEACHER TO ADVANCING CIVILIZATION.

BY DAVID N. CAMP, OF NEW BRITAIN, CONN.

THE history of man has ever been marked by change and progress. The features, the whole physical organization, and the mental qualities of different races have partaken of this change. Social life, civil systems, and religious belief have all been affected by it.

Ancient races and forms of civilization have passed away, and others have taken their place. It is true that development has not been uniform and continuous. "Here at one time, and there at another with greater intensity, — now torpid and slow, — now fresh and vigorous, — but ever and always still forward," the human mind has been acquiring a cumulative force from the experience of the past, and has been rising by successive stages to a higher development.

If any of the principal nations or most civilized races of the world be selected, and its history given, it will be found marked by change in thought and

action, in the various particulars which characterize it at different times. Habits and customs ever so firmly fixed, the modes of living, of dress, and of social intercourse, are constantly changing. The means of communicating thought, of conducting trade, of domestic or foreign intercourse, amply sufficient for one age, are entirely inadequate for another.

Forms of government, venerable for antiquity, are thrown off as the dust of ages, and other forms, in harmony with the intellectual and moral life of the nation, take their place.

There is a change in literature. Library shelves may be crowded with the ancient classics, and these works will be read and studied by the scholar, and prized by all men of thought; but they do not constitute the reading of the intelligent masses, or stamp their impress on any active community. It is a later literature, with fresher thoughts breathing the spirit of another age, which is now moulding the character and forming the opinions of men. So in science and art, every age and almost every year bears witness to the power of the human intellect in new discoveries and inventions, and the increased helps to a higher and nobler culture.

Change is not always progress. It may sometimes, at least, temporarily be retrograde, and individuals and nations may be sinking into barbarism; but the great result of the multiplied, aggregate changes in society and in human thought is a higher, nobler life, an advancing civilization.

Whatever may be the outward form, and however slow or rapid may be the various steps, human progress arises from causes existing in, or operating upon, individual mind, for the exponent of civilization in any age or nation represents not merely the power or intelligence of some conventional body or organization called society, but the aggregate or average skill, intelligence and culture of all the individuals who compose that society.

The great element in advancing civilization is education. *This always has been, and always must be, the chief instrumentality*, by which an individual or nation is raised from comparative ignorance or barbarism to intelligence and refinement, and it is the same instrumentality which must raise from a lower to a higher civilization. All other agencies, indeed, presuppose this; for developed intelligence is a condition of their operation, and their efficiency depends in a great degree on the educational condition of the man or community.

Education is twofold — indirect and direct. The former consists of all those influences coming from nature, art, and society, which, though uncatalogued, and perhaps unconsciously received, are nevertheless mightily effective in forming character and determining the condition of the recipient.

Plant a colony on a vast unbroken plain, and let the childhood and youth of a generation be passed there, while another community is brought up in a rugged country, where mountain scenery meets the eye, and mountain air is inhaled with every inspira-

tion, and aside from any direct lessons which different opportunities have afforded, it will be found that there have been impressed upon these different communities, different ideas which have given to the whole intellectual and moral nature a caste never to be wholly obliterated. It is well known that some zones of climate are more favorable than others to a high civilization ; and a certain density of population, neither the crowded city or the sparsely populated country, furnishes another favorable condition. So, also, between the seaport and the inland village, the quiet hamlet and the bustling town, there are differences in the indirect educational causes. Each situation has its attendant circumstances and local influences more or less favorable to human culture. The same is true of social and providential relations ; the child in the family of affection and refinement, or surrounded by strangers and exposed to vicious example, in the mansions of wealth, or in the abodes of poverty, left to his own resources or entirely dependent, is receiving daily lessons more potent in their influence than human calculation can measure. These are the varied circumstances, the never failing agencies which make up that indirect education, that, however unconsciously operating on the human soul, is nevertheless ever active and to be considered in all plans for direct instruction.

Direct education results from the carefully considered, determined efforts of parents, teachers, and others, to secure, by the use of special and chosen means, the higher development of man. The means

employed are various, and the agencies which directly further this work are not all alike. Different classes, by the pen, the press, or in other ways, do much to diffuse information, and to contribute to the education of a community. The work of the religious teacher has deservedly been considered a high and an important one, and has enlisted the energies and received the attention of earnest, thoughtful minds in all ages. No true friend of the best interests of society and the highest welfare of the race will question its importance; but, to-day, we leave this more special department for that of the broad, comprehensive one of complete, general education, and, in this, limit our inquiries principally to the instrumentality of the living active agent, and take for our theme "*The Relation of the Teacher to Advancing Civilization.*" We do not select this, intending to enter the lists as the champion of the teacher; he needs no champion. Neither do we do it to magnify his position, or compare it with others. We believe the profession of teaching is to be exalted, not so much by any proclamation of its importance and the votes and resolves of teachers' associations and meetings, as by the influences of the teachers' own faithful, ever-constant, self-denying, and successful work. We make no comparisons, question no theories, challenge no replies, but simply state as our proposition that the living teacher always has been, and he must be in the future, an important agent in advancing all that is true and good in any civilization.

This might be inferred from the constitution of

things. On the one hand, is the created universe with its laws and manifestations, as subjects of study ; on the other, is the mind of man, with all the faculties necessary to observe these manifestations, and understand these laws. Everything seems to have been created and so adjusted in its various relations, as to be just fitted for the exercise and development of some faculty of the human soul, so that the child at birth is introduced, not into a foreign world opposed to his true and noblest development, but to one just fitted in its adaptation to that development. The human soul awakening to its capabilities, struggling out from its ignorance, needs a guide, some one who is acquainted with its wants, its powers, and at the same time has a comprehension of the innumerable influences that may be made to contribute to the best and highest culture.

This is the office of the teacher. He is to understand the many indirect influences which are brought about the child and affect his development. And while he exercises such control as is possible and right over these, he is also to select from all created things, from all thoughts, those which are best adapted to the great work of human culture. He is to bring from art her treasures, from science her teachings, and from history her contributions, and, with these aids, to lead out the awakening thought, to discipline and educate all the powers of the mind, and thus prepare each individual to be a promoter of, and a participant in, a higher civilization.

History also bears testimony to the truth of the

proposition. Adam was not only the first man but the first human teacher, but ere he taught he was himself a pupil. In that terrestrial paradise, amid all the freshness of a new creation, was the first lesson given. God spoke to Adam as to a child, of the fish of the sea, of the fowl of the air, of the herb bearing seed, of the tree and its fruit, and then brought to him all living things to see what he would call them. Adam was a teacher. Children's children were gathered about him, till eight generations could together listen to the story of Eden. There was Seth, over whose head had rolled eight hundred years; Enos and Cainan who had numbered more than six centuries, and were yet in the vigor of manhood; Methusaleh, yet a youth, though with two hundred years of experience; and pious Enoch, — all gathered around that first human teacher, while he taught as no man since could teach.

According to the traditions of the Rabbins, soon after the deluge, Shem established a school, and was assisted by his great-grandson, Eber. The patriarchs, in their turn, became teachers. Children and servants were taught from their lips, and trained in their households for the trials and duties of the patriarchal age. The elders, the princes of the tribes, were the teachers of the people. Moses was instructor as well as lawgiver. His teachings and statutes the people were to teach unto their children; to speak of them when in their homes, when they walked, when they lay down, and when they rose up. Their lessons were bound upon their hands and

worn as frontlets upon their foreheads; they were written upon the door-posts of their houses and on their gates, constantly present as daily lessons. Soon after the children of Israel were established in Canaan, schools were organized. At Ramah, Bethel, Jericho, and Gilgal, were schools or colleges of the people, attended by young men, priests and Levites, princes and subjects, and taught by the prophets. These schools appear to have had an important relation to the civil and religious polity of the nation, and were designed to rouse, develop and strengthen the powers of thought, and to educate teachers, writers and statesmen.

In one of the most prosperous reigns of the kingdom of Judah, the illustrious monarch sent out from these schools five princes as itinerant teachers. They were accompanied by nine distinguished Levites and two priests. They went throughout all the cities, taking the book of the law of the Lord with them, and they taught the people. The result was not only the higher culture of the people of this kingdom, but "the fear of the Lord fell upon all the kingdoms of the lands that were round about, so that they made no more war against it." The nations brought presents of silver and flocks, and the kingdom became greatly strengthened.

The Jewish schools seem to have existed at the time of Christ, and the principal recorded incident of his youth is in connection with a visit to one of these schools, where his understanding and answers astonished the teachers. And in his own work upon earth,

teaching occupied an important place. Not only in his public discourses in the temple and to thronging multitudes, but for more than three years he taught his chosen class, giving lessons from the lilies of the field, the birds of the forest, and the foxes on the hills of Galilee; from seed-sowing and harvest, from the morning clouds and the evening sky; by the wayside, in the desert, on the mountain, from the proud and the lowly, the wise and the ignorant, and, more than all, from his own irreproachable life. The disciples were also teachers, receiving their commission "to go and teach all nations," directly from the lips of their Divine Master, and baptized into the pentecostal spirit, they became eminent as teachers. Paul, educated at the feet of Gamaliel, was a teacher at Athens, Corinth, Ephesus, Rome, and elsewhere.

But it is not in sacred history alone, or chiefly, that we may find evidence of the influence of the teacher in the elevation of the race. If confidence may be placed in uninspired narrative, all along in the whole progress of human thought and action, the teacher has occupied an important position in advancing civilization. While Moses and Joshua were educating the Israelites to an acquaintance with the laws and requirements of the Theocracy, Cadmus was teaching his infant Theban colony the alphabet, introducing a new element as an instrumentality for educating the race.

Linus had taught music in Greece, and the melodious voice of his pupil, Orpheus, had been accompanied by the lyre as he sung on Grecian mountains,

before the harp of David had been heard on Judea's plains. While the prophets were instructing in the doctrines of a new theological dispensation, the Ionic philosophers were teaching to their disciples a system of physics, as well as the higher principles of metaphysics. As Malachi completed the Old Testament canon, Socrates promulgated new ethical doctrines. Thoughts of God, of the universal cause, of human duty and destiny, stirred his soul, and he uttered his thoughts in the public walks and groves, teaching by the wayside and in the houses of his friends. His disciple Plato gathered around him a crowd of illustrious pupils, and taught them in the groves of Academus. Aristotle, who was for twenty years a pupil and disciple of Plato, afterwards become so distinguished for his power in instruction as to be named "The Teacher," and gave to the "Lyceum" a distinction as high as that conferred on the "Academy" by his master. Who can now measure the influence of these three teachers upon civilization, or upon the human race?

By the efforts of these and others, early teachers, those who were willing to listen were collected in companies as schools, and thus instruction was given, and the influence of the teacher exerted without stated action or law. It was in these associations, consisting simply of the teacher and his disciples, that the great schools of ancient philosophy were started, and the foundations of all knowledge and all education were laid. They were associations of kindred minds aspiring after the same noble object,

and taught by a superior mind who thus gave direction to thought, stimulated culture, and aided his disciples in their inquiries after truth.

But not only were the poets, the orators, and the philosophers of Greece, teachers, but her artists also taught. Instead of finding authorities and models in the past, they studied nature and created authorities for the future. They everywhere contemplated proportion, the majestic, the beautiful and the true. The inspirations of real genius were individualized and fixed in visible forms, with an originality only passible in a similar age. The classic models of Phidias, the truthful representations of Myron, and the ideal beautiful of Scopas and Praxiteles, were all lessons for the race. These were expressions of Grecian art whose influence did not perish in the grave of Grecian power. Each artist, poet, scholar, was in some sense a self-made man, working out his own grand ideal, and then stamping it upon the race, he became an educator. Thus the ancient Greeks have well been called a nation of teachers, and that little peninsula country was truly the fountain from whence sprung many of the elements of the highest civilization the world has yet known. Her battle-fields and her warriors may be remembered in history, but "her civilization was carried down to other generations, not on the shields of her warriors," but in the language of her orators and poets; in the principles and rules of her philosophers; in the majesty, the glory, the grace of her artists, the great teachers of the age in which they lived, and all educators of the ages which have followed.

The Roman was first a scholar and then a teacher. Unlike the Greek, he had a new language to learn, philosophic systems to examine, and established principles to acquire. Direct education in the Roman Empire began to take the form of regularly established schools. The Greek teachers and philosophers came to Rome, and, though envy and jealousy attempted to drive them from the city, they obtained too strong a foothold to be displaced. They stamped their impress on the character, the thought, and the literature of Rome, and the teachers whom Cato would have banished, the Cæsars honored. Colleges were founded, and teachers and professors were appointed, who by their influence on the national character and culture, developed the great ruling ideas of the Augustan age, and made Roman literature and Roman law instrumentalities in future civilization.

The influence of the teacher is also seen in the changes produced on the Arabic mind, and the effects of the Saracenic element in advancing civilization. Mahomet required the Koran to be taught; thousands of schools were opened, teachers employed, thought awakened on intellectual subjects, and a people who had thus far taken no part in the world's civilization became the leading nation of the world in science. From the schools of Arabia and Turkey teachers went westward to Northern Africa and Spain. Wherever they taught, civilization was advanced and learning increased. The Saracenic literature which was cultivated and developed by these

teachers, was for a long time an important element in all comprehensive culture, and its teachers and scholars were for seven centuries among the brightest ornaments of intellectual progress. The universities at Cordova, Toledo, Salamanca, and Seville were celebrated all over Europe. The teachers, the philosophers, and the poets of the Saracens have passed away, but their influence is still felt in the civilization of Europe.

During the darkness of the middle ages, few names of teachers are found on the historic page, and little progress seems to have been made in human culture. It was then that in the cloister, religious teachers preserved the literature of the past, and, in the hours of silent, solitary study and of secluded instruction, gathered up the dead treasures of Grecian learning, the seeds of Roman culture, and made them available in the civilization which followed.

Christianity in its earlier stages necessitated study, thought, and teachers; but it was free. Its faith, and hope and life were experienced as the spontaneous outgrowth of principles deeply seated in the heart, affecting the common duties and trials of daily toil and suffering, but raising no disputed polemic questions. The progress of Christianity involved the necessity of instruction in language and history. When it became a great ecclesiastical system, it met with opposition in doctrine and form. It called in the aid of science; instruction was required in philosophy, rhetoric and mathematics; and its leaders

were of necessity teachers; the intellect was educated, and schools established. These increased in power, and influence, and method, till the foundations of Paris, Oxford, Cambridge, and Bologna were laid. These conventual and cathedral schools, the earlier universities, originated not in any municipal law, but in the efforts of teachers to extend the knowledge of those studies which they believed to be most important.

In the eighth century, the distinguished Alcuin of England became the teacher and adviser of Charlemagne, and in connection with Clement of Ireland, and Theodolf of Germany, established those schools which gave to the empire of the West so much of renown. Through the influence of these schools, theology took a new method of discussion. It was no longer confined to appeals to the Scriptures, the fathers, and the traditions and decisions of the church; it appealed to reason, also. Metaphysical questions were brought within the domain of theological discussion, and human thought was advanced.

The latter part of the eleventh century and the beginning of the twelfth were distinguished for the work of Roscelin, William of Champeaux, and Abelard, the three great teachers of Paris, whose lectures, discussions, and instructions drew around them students and scholars from all Europe, till in the twelfth century it was said that the students of Paris outnumbered its citizens.

Universities now became distinct corporations, under the patronage of kings and prelates, and the

diffusion of knowledge was an object of solicitude to monarchs as well as philosophers, but it was still the teacher who gave direction to education, and stood in the front ranks beckoning on the race.

“The teachers of the universities were called masters, directors, or regents. In the original constitution of Paris and Oxford the university was taught and governed by the graduates at large. All the graduates were teachers.” Graduation was nothing more nor less than a formal reception into the body of teachers. “The bachelor was an imperfect graduate, admitted to exercise his vocation of teacher partially for the sake of improvement. The master was a perfect graduate, and could govern or teach with full authority. All graduates were obligated to teach during a certain time, and were privileged to teach perpetually.”*

As teachers multiplied, they selected distinct branches of study, which they *professed* to teach; hence, professors. Thus it may be seen that all the earlier movements in scholastic and university education originated with the teachers, and not with the state, and the degrees of *Master* and *Doctor* were conferred simply on teachers, and were really the certificates which qualified teachers to engage in their avocation.

Other schools arose, established privately or by endowment. Many of these schools were preparatory to the university, but they were the work of individuals and not the result of legislative action.

* Dr. Tappan.

It was the living teacher, whether in the university, the gymnasium, or the primary school, that taught, acted, directed educational measures, impressing the generation in which he lived, and adding to the influences and instrumentalities which were to bring a higher civilization.

Time will not permit me to trace out the influence of professional teachers on the civilization of Europe in succeeding centuries. The establishment of the order of "Brethren of the Common Life" in the fourteenth century, and similar organizations which followed, were intended to popularize education, and the influence of the teachers, sent out from these societies, was felt over a large part of Europe. Two centuries later, the light of the Reformation dawned, and plans were soon developed for the more complete education of the masses. Luther, Melancthon, Calvin, and the timid but sincere Erasmus were all teachers, and some of them devoted the greater part of their lives to this work.

In the sixteenth century, John Sturm, trained in one of the schools of the Christian Brethren, was one of the most eminent teachers. By his enthusiasm and his great executive power, he influenced thousands of other teachers, organized the gymnasia of Germany, and modified the whole plan of education in central Europe. At the same time, in England, Roger Ascham, the friend of Sturm, and the teacher of Prince Edward and Queen Elizabeth, was moulding the character of the English court, and with his contemporaries, was introducing better methods of instruction and discipline.

In the sixteenth and seventeenth centuries, Bacon and Descartes, Leibnitz and Locke arose, surveyed the whole field of philosophical speculation, rebelled against dogmatism, proclaimed freedom of thought, suggested new methods of scientific inquiry and study, and prepared the material for the teacher. The most eminent teacher of the seventeenth century was Comenius of Moravia. He saw more clearly than his predecessors what was necessary for the improvement of education. He applied the inductive system of Lord Bacon to instruction, introduced pictorial illustrations in school studies, and, by the improvements he suggested, exerted an influence over elementary education. He was invited to Sweden, Poland, Austria, and by the Parliament to visit England to organize better systems of instruction. In the latter part of this century, Franckè, of Lubeck, by his earnest life and entire devotion to the cause of education, exhibited the power of simple faith in the moral education of the young, and drew around him a class of persons who studied his successful methods, learned from his spirit, and became themselves the leaders of the educational influences, which to so great an extent affected the civilization of Europe.

Perhaps no teacher in the eighteenth century is more deserving of mention for his influence on educational systems and methods, and through, these on the great work of human progress, than Pestalozzi. He had observed the necessity for better methods of instruction, and through a series of experiments,

attended with failures and successes, and perhaps more of the former than the latter, established a system of instruction, which first in his native country, Switzerland, then in Prussia, and afterwards in all Germany, produced an impulse which pervaded the continent of Europe. Agents of kings and princes were sent to become acquainted with his system and principles, that they might be applied in other countries. Prussia became one of the most intellectual nations of Europe, and other countries were enlightened by his teachings. His principles and methods are now awakening new inquiry, and receiving more than ordinary attention in this country.

If from Europe we turn our attention to the United States, we shall find that the planting of the American colonies in the seventeenth century had an important influence in the cause of civilization. The spirit of liberty which changed New England from a wilderness to a place of settled habitations, was accompanied by a desire for knowledge. Common schools were established, and amid the trials and reverses of the early colonists, thought was awakened, and the foundations laid for a broader and more comprehensive intellectual progress and moral culture. I need not mention the names of New England's early teachers. Their work is well known. To their self-denial, their faithfulness, and their single and combined efforts are her progress and present position much indebted.

One name, belonging to the present century, should be mentioned as exemplifying the power of

female influence in the teacher. Mary Lyon saw the necessity of some provision for the better education of the daughters of New England. She thought and prayed over the subject, till the idea fired her soul, success crowned her efforts, and Mount Holyoke Female Seminary was the result. Her influence had encircled the world before her death, and it still lives in the teachings of thousands of her pupils, who from America, Turkey, India, China, and the isles of the sea still call her blessed. No one who was present at South Hadley at the anniversary following her death, can forget the tribute paid to her memory. Her biographer, Dr. Hitchcock, had in the discourse of the day recapitulated the principal events in her life, and eloquently portrayed the influence of her spirit and labors ; but it was at the evening hour, when standing by the little enclosure which protected her tomb, we saw the train of former pupils who for two hours came to drop a tear by her grave, that we felt most the power of her life.

Dr. Arnold, of Rugby, her contemporary on the Eastern continent, lived not only in the schools which he so successfully taught, but wherever his scholars went ; and his influence may still be seen in the lives and actions of some of England's truest noblemen.

There are many other names worthy of mention. All history, sacred and profane, from the creation till the present time, bears testimony to the influence of the teacher in the advancement of civilization.

The action of states and kingdoms in the cause of

education, furnishes additional evidence of the teacher's influence. The wars which desolated Europe and America the latter part of the last century and the first part of the present, and which for a time checked the operation of the more peaceful agents of civilization, were followed by a strong reaction in favor of the arts and instrumentalities of industrial and social progress.

Multiplied discoveries and inventions have lessened the toil and ameliorated the condition of producers, and more time has been given for intellectual culture and social improvement. It has been found true that education is necessary for this improvement as well as for the stability and permanency of government. The New England colonies had planted the school by the side of the church, and both with the first landmarks of civilization in the wilderness, but when in the last quarter of a century, the leading minds of these States turned their attention to the improvement of the schools as a necessary condition of a high civilization, they discovered that there was a great deficiency in well qualified teachers. Massachusetts first, next New York, third Connecticut, and finally most of the Northern and Western States established normal schools or made other provision for the special education of teachers.

In England, the first appropriation by government for the purposes of general education was in 1832. The amount at first was £ 20,000 per year. In 1839, the Committee of the Privy Council was organized. The grants were at first made to assist

local efforts to promote education, and were principally expended in the erection of school buildings. The results of the school inspection entered into by the Committee of Council, exhibited the fact that the money could not be wisely employed without competent teachers. The government commenced the work of training teachers, and increased the grants from time to time till it now amounts to over two millions of dollars annually appropriated for the education of teachers alone, and thirty-four training colleges are in operation in England and Wales.

In France, the first normal school was established in 1816, and there were but thirteen in 1830. The present system of education, established in 1830, requires that a normal school be sustained in each of its eighty-six departments. In Holland, where are perhaps the best primary schools of Europe, still more care is taken by government for the professional training of teachers. Wherever civilization has made any considerable advancement among the masses schools have been established, and the teacher has been recognized as an important agent in contributing, by his work and influence, to knowledge, science, and to the elements of general civilization.

If to the testimony of history, as viewed from the stand-point of mere human instrumentality, we add the evidences which must be considered, when the view includes the Divine agency, the argument for the importance of the teachers' work is not only measurably increased, but it clearly indicates that this work is changing in its requirements and obligations.

The teachings of nature, the lessons of Providence in God's dealings with the race, and the pages of inspiration all reveal a constant progress in the means and results of human culture.

The mind of man has been created with faculties, which, while suited to the race in its infancy, are yet competent for it in its manhood or ripened maturity.

In the infancy of the race, man's physical wants were few, and easily supplied from the stores at his command; so also with his intellectual wants and requirements.

The simplest lessons of faith, religious form, and civil observances were all that could be understood. God was in the wind, the storm, the thunder, in the seasons, in prosperous and adverse circumstances; he spoke from the burning bush, the quaking mount, and none the less in all natural phenomena. Mankind expected direct communication from the spirit world. As human thought advances, the Creator retires from the constant manifestation of his extraordinary miraculous agency, and reveals himself to man through the operation of physical and spiritual laws; and a necessity is created for teachers, as the expounders of these laws, and as guides of the young in their intellectual and moral development, and in their search after truth. It is thus, that each coming generation is placed on higher vantage ground, and may commence its development and proceed in its culture, with the knowledge and experience of the past as its natural birthright. Successive years are constantly adding new material for man's use and study.

As civilization has advanced, necessities have arisen in social and business life, and something has always been found to supply the want. The ancients built their monuments and aqueducts ignorant of many of the simple laws of physics. The latent power of water when converted into steam, remained hidden till the arts of civilization could make it available for useful purposes. That subtle agent, electricity, was known only to be feared, till the advance of knowledge and culture made it important as an instrumentality for the communication of thought. The metals have been discovered in the order and at the time when mankind seemed prepared to use them wisely. So with the whole material world as relates to human thought. Each advance in science, each discovery or invention, has furnished new subjects for study, and given additional exercise to the intellectual and moral powers. The whole world of matter seems created both as a type of the progressive civilization of the race, and also as the means for advancing that civilization. From the old granite rocks which base the mountains, through each successive strata of the earth's crust, to the silt borne down by the last shower, there come lessons. The geological record reveals the condition of the earth in other days, exhibits the progressive development of the ages past, and becomes a type of social progress and elevation. Oceans, seas, continents, mountains, and islands are no longer found existing without order, but stand related to each other, and express to a mind able to comprehend their relations, the outward working of

a law older than continents, and as certain as existence itself. They become instinct with a new life and evidences of a Providence that wisely and beneficently prepared and fitted up the great treasure house of the earth for man's wants, when as yet man was uncreated, and which has as wisely and beneficially preserved all its treasures till the dawn of a higher civilization which is able to take them and use them wisely. And the same Providence has as evidently been watchful of the rise and fall of nations, and "amid changes and revolutions, from the tomb of dynasties and the grave of empires, pointed to the great law of human progress, and evoked out of seeming decay the germs of a higher life." Forms and ceremonies are constantly changing, but principles remain, and each revolution sets some truth more strongly in the foreground. Liberty, justice, and benevolence are becoming realities, to be recognized by nations as well as individuals. They are more firmly fixed by every historical change, and with other great truths, finding a place in individual thought and national life — the heritage of each new coming generation.

Thus, from these varied sources, come lessons to the race to-day. On all is stamped the impress of the Divine mind, and all unite in pointing to a higher state of human experience than has yet been reached. These accumulated treasures are placed before the teacher on the one hand, the divinely prepared material, while on the other is the human soul, with faculties ready to be developed, just fitted for all the lessons these instrumentalities will bring.

Great as are the mysteries of science, the achievements of art, and profound as are the depths of philosophy, the human mind does not hesitate to study them all. The last fifty years have been fruitful beyond all which have preceded them, in discovery, invention, and scientific progress. The fiercest elements have been tamed and made to contribute to the comforts and luxuries of man. Distant nations are brought into near relationship; business, learning, and friendship speak their wants, and from thousands of miles away, over mountains and under seas, comes back the quick response which quickens the pulse of trade, reveals a new truth in science, or brings joy or sorrow to the household circle. These results not only mark the progress of human thought, but they influence the heart of the nations, and it throbs with quicker and stronger emotions on moral subjects, and beats more responsive in human sympathy. Benevolence, charity, and faith in humanity are taking new forms, and extending by new channels, till every kind of human suffering is mitigated, and every variety of human want is alleviated.

Revolutions follow revolutions in rapid succession, and though for a time liberty may be shackled, free thought cannot be suppressed. The human soul will not be silenced nor its fires quenched till despotism, tyranny, and ignorance are dethroned forever. Every discovery in nature, every step in scientific progress, and every triumph in art, increases the necessity and adds to the responsibility of the teacher's work. The field of knowledge is enlarged, the

subjects of study are multiplied, and the influence of the teacher is increased. But it is when, from a stand-point that takes in moral changes, causes and effects, the whole field of human culture is viewed; when patriotism, philanthropy, benevolence, faith in, and love for God, enter as subjects to be taught and as elements of human character and progress, that the teacher's work can be best understood, and his relations to the progress of civilization can be best known.

The present time may not seem to justify these positions. The government which has represented the greatest liberty, the freest thought, is now rent by the throes of rebellion. The civilized world stands aghast at the spectacle, and inquires why the best, the most popular government on earth should be assailed by its own members. The patriot has mourned and the philanthropist has wept over the nation's peril, but amid all the darkness, doubt, and thick clouds, there are rays of hope. The God of nations still reigns. Wars and revolutions have often been the precursors of more rapid progress in the arts of civilization. They have been the means of breaking down the chains and sweeping away the obstacles, which have always been barriers to human progress, and have thus torn away the long cherished relics of barbarism.

Much as civilization has been furthered by popular education in the past, it needs no prophetic ken to announce that increased attention must be given to it in the future. Schools, colleges, and universities

must be adapted to a higher work, an advancing civilization. The great instrumentality which must give character to our schools and make them fountains of intelligence and nurseries of good morals, must be skilful, faithful teachers. The work of the teacher has often been called a great work, but it is only when viewed as a part of the plan of God for the promotion of a higher civilization that it assumes its proper relations. If in the Divine mind there has ever been a plan for the education and civilization of the race, and nature, providence and revelation have been made to contribute to man's highest knowledge and happiness, the position of the teacher is not an isolated one, but connected by innumerable ties with all the past, and, by chords ever vibrating, with all the future. The true teacher is not merely the instructor of arithmetic and grammar to a few children in a particular locality, but a co-laborer with the great and good of other lands, — a successor of a long line of noble spirits engaged as God's workmen in redeeming the race from the thralldom of ignorance and vice to a higher civilization, to an acquaintance with the spirit, and a practice of the precepts, of the Great Teacher. And it is just here that the power of woman becomes so effective. Her influence, when rightly exerted, is always refining and ennobling; but in her sphere as a teacher she may touch the springs of thought and action in the human soul, at the very time when those impressions are most easily made, which will be longest retained. She may be unknown and unappreciated, and her

work may be despised by the fashionable idler, but it is nevertheless the great work of this world, and ever under the keeping of him who never slumbers, and, if well done, will receive the Divine approval.

School work viewed in its proper light ceases to be drudgery, confined to the drilling of classes and a routine of questions and answers, and becomes imbued with the spirit of enthusiasm, a true art based on the highest of all sciences, and ever fresh with living thought.

If limited to a single child, it is nothing less than to take an heir of immortality, possessed of powers which no finite intelligence can measure and no human law can limit, and to educate this being so that these powers may be harmoniously developed, and the helpless child of to-day may become the intelligent upright man of the future, prepared to serve his generation wisely, and to contribute to the elevation of society and the advancement of man.

To secure these qualities and attainments in the highest degree, not only in one individual, but in multitudes is the teacher's vocation, and his purpose must ever contemplate it as the aim of all his efforts. His ideal must be high, and include the perfect man, physically, intellectually, and morally, standing forth in the image of his Maker, strong and healthful in body; clear, ready, profound in thought; true and firm in morals, ready for any work, or any sacrifice to which God may call him. The teacher must be able to see thousands and millions of men and women constituting society, mutually contributing to the

highest culture, the noblest development, and the purest enjoyment of all. His ideal, it is true, must be limited by possible attainments and excellencies, put by no present examples. We may contrast barbarous races with the half civilized, and the latter with more civilized and enlightened, and so on from one grade of social order to another, till we reach the highest yet attained, and still be far below the capabilities or possibilities of the race. The problem yet remains to be solved, to determine to what excellencies, symmetry, and perfection, society on earth may be brought, by proper education of every person constituting such society. Who can better practically solve this problem than the teachers of this country?

But the teacher having his ideal complete in all its parts, and perfect in his own mind, must seek to realize it in others. He has at his command, nature in her varied forms, art with her ministry, science and her teachings, history with her accumulated treasures, her literature and philosophy, and the revealed will and promise of his Heavenly Father. He must understand these and other instrumentalities, the forces operating, and the methods which are to be applied, and so use them wisely and rightly as to secure the best results.

He must be a constant living illustration of his own ideal. His person, habits, manners, and conversation, even his whole life at all times and on all occasions should be what he would realize in his pupils. In all these respects, he must stand forth not egotistically assuming to be what he is not, but

living humbly and truly as he would have others do. The young man who has never known the luxury of self-sacrifice for others has not learned one of the first lessons of the successful teacher. There is a power emanating from a life of constant devotion to any great work, from a steady perseverance to secure a noble ideal, from the self-sacrificing spirit which forgets itself in its labors for others, that has always been and must always be felt, but nowhere more than in the life of the teacher. It gives weight to advice and force to instruction. The life of Arnold or Mary Lyon well illustrated this truth.

The teacher must necessarily be the pioneer in progress, the leader in all real reforms. He is supposed to have studied the relations of causes to effects till he comprehends the elements of civilization, the instrumentalities of all true advancement, and is able to direct them wisely. But he has difficulties to encounter and dangers to avoid. He is not to embrace every new theory or follow every self-styled reformer.

From the remarks of some accredited educators, one would suppose that they believed children were created to illustrate some system of grammar or geography, to practise certain methods in arithmetic, or to prove some empirical project to be true. Two classes of theorists are now pressing their claims. One class would have the child's education commence with the use of a text-book, and be confined to the printed page and the questions and answers of some supposed master in the past, while another class

would discard all text-books, and give the child objects, teaching him from nature and from the observation of the workings of his own mind. It is not our purpose now to discuss methods, but we believe the teacher would make a mistake who should adopt the views of either of these classes, and many other theories equally impracticable in the school.

Does any one who has ever seen an infant in the cradle and compared it with a bright active child of four years old that has never taken a lesson from a book, need to be told that, that child if properly trained in the family has been receiving the best possible education; that the senses have been all alive, that the perceptive faculties have been cultivated, that memory and imagination have been exercised, and that he has obtained just that knowledge which is most important to him? And because his school days are to commence, must he be cut off from the world without, from all forms and colors and beautiful things, and be confined to the pages of a book? On the other hand, will the advocate of teaching from nature alone close up to the child, the accumulated treasures of the ages past, the literature, the scientific attainments and the philosophy of the gifted of other days?

Rather let the teacher be a conservator of all that is good in literature, in science, and art; let him use it wisely, not as a hindrance, but as a help to human progress; and let him be equally ready to listen to Nature's teachings, to observe her lessons and to employ them as constant aids.

Let him remember that the human soul is greater than text-books, systems, and methods, and if he rightly understands its capabilities, its laws of development, he may use all the means God has placed in his hands for its culture.

Let him be an earnest searcher after truth and an active laborer in the cause of humanity, and then though he may grow old in the work, he will be ever buoyant and cheerful, and ready with something new and fresh for his school.

Teachers should ever be ready to recognize other instrumentalities, and acknowledge the labors of other professions in the promotion of a true civilization.

They need not be political partisans or sectarian bigots, and yet they may properly welcome every effort, and rejoice at every instrumentality, which rightly contributes to the improvement of society.

If they can rightly appreciate their work, strip it of its fancied coloring, elevate it from its mere drudgery and routine, and see it a God-appointed vocation, related to the highest interests of man, to the noblest culture and the most advanced civilization, then it may be expected that the best talent and the most thorough preparation will be given to it. And that a love for it with all the toil, self-denial, and watchfulness it imposes; a faith in its results which no obstacles can overcome, will bring to it an enthusiasm and a devotion which, with the Divine blessing, shall crown it with success.